ECCLESIASTICAL ART IN GERMANY.

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Frontispiece. Altar from St Wolfgang in Upper Austria. *See page* 134.

ECCLESIASTICAL ART

IN GERMANY

DURING THE MIDDLE AGES

BY

DR. WILHELM LÜBKE

PROFESSOR OF ART HISTORY IN STUTTGART

TRANSLATED FROM THE FIFTH GERMAN EDITION

WITH APPENDIX

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TRANSLATOR'S PREFACE.

DR LÜBKE'S name is now well known in this country as an eminent art critic, and this work was, Dr Lübke mentions, the first upon the history of art which he offered to the public.

That no apology is required for its publication in an English form, will be apparent to all interested in the subject, from the vast research into ecclesiastical art which it exhibits, and the evident utility of the illustrations. The fact, also, that the work has reached a fifth edition in Germany, testifies to the value and repute of the original.

As regards the translation, in a work so condensed and so full of technical terms, I have found it somewhat difficult to adhere closely to the author's meaning and yet avoid the national idioms of the original work. I trust, however, that few of these will be detected.

I have to acknowledge my obligation to Mr Robert Anderson, architect, Edinburgh, who has assisted me in the translation of the various architectural terms, and whose help I have found of the greater importance, that the best German dictionaries often proved deficient, and failed me in time of need.

I did not consider it my province to correct the British public in the nomenclature of German towns. I have therefore adopted the names in general use in this country for well-known

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persons and places, such as Charlemagne, Aix-la-Chapelle, Cologne, Ratisbon, &c., introducing in the Index the original and correct German names, with cross references to their English counterparts. The greater number of the places mentioned in this work, however, are, comparatively, so little known in this country, that their names have never been Anglicised, and they therefore appear in their original form.

On account of the multiplicity of minute notices of church buildings and their several localities, as well as of their structural details, ornaments, furniture, &c., with which the work abounds, it has been thought advisable to add an Index, which I hope will add to the value of the book, by rendering its varied contents more readily accessible.

The necessity for an Appendix, referring briefly to the more salient points of divergence between British and Continental architecture, forced itself upon me, and its *raison d'être* I have further explained at its commencement.

A short Glossary of the principal technical terms has also been added.

L. A. W.

CONTENTS.

FIRST PART.

HISTORY OF ARCHITECTURE.

PAGE

I. Early Christian Basilicas, ... 1

II. The Byzantine Style, ... 10

III. The Romanesque Style—

1. Basilicas, ... 16
2. Deviating Forms, ... 42
3. Vault Building, ... 44

IV. The Transition Period, ... 51

V. The Gothic Style—

The System, ... 66
First Epoch, ... 78
Second Epoch, ... 82
Third Epoch, ... 87

VI. German Brickbuilding, ... 93

VII. Arrangement of Monasteries in the Middle Ages, . . 102

SECOND PART.

CHURCH FURNITURE.

I. The Altar, ... 113

II. Altar Furniture—

1. Chalices and Patens, ... 137
2. Ciboriums, Pyxes, and Monstrances, ... 144
3. Liturgical Books, ... 149
4. Other Furniture and Vessels, ... 151

PAGE

III. Classes and Religious Orders—
1. Classes and Churches 156
2. Lesser Fraters and Religiosæ 162
IV. Dedications and Patron Saints 171
V. Feasts, Services and Ornaments—
1. Feasts 184
2. Vigils 190
3. Monuments 192
VI. Services, Prayers and Beads—
1. Choir Ruling and Lessons 202
2. Sermons and Psalms 204
3. Organs 208
VII. Burials and Funerals—
1. Burials and Churchyards 212
2. Funerals 221
VIII. Painting and Ecclesiastical Decoration—
1. Wall Paintings 227
2. Glass-painting 232
3. Tapestry 237
4. Pavements 238
5. Sculpture 241
IX. Miscellaneous—
1. Lesser Churches 250
2. Crosses 251
3. Sounding Vessels 252
4. Doors 253
5. Bells 255
6. Scenes representing the Passion 257
7. Universal Signs 260

APPENDIX 265

GLOSSARY 279

INDEX 283

LIST OF ENGRAVINGS.

FIG.		PAGE
1.	Ground-Plan of St Paul's at Rome,	2
2.	Interior of St Paul's,	3
3.	Corinthian Capital,	5
4.	Composite Capital,	6
5.	Ionic Capital,	6
6.	Ancient Cornice Moulding,	7
7.	St Apollinare at Ravenna,	8
8.	Minster at Aix-la-Chapelle (ground-plan),	12
9.	St Sergius and Bacchus (ground-plan),	12
10.	Capitals in St Vitale at Ravenna,	13
11.	Capital from St Mark's in Venice,	14
12.	Church of St Sophia, Constantinople,	(*facing*) 16
13.	Romanesque Basilica,	18
14.	Longitudinal Section of the Basilica,	18
15.	Arcades of St Godehard in Hildesheim,	19
16.	Romanesque Window,	20
17.	Transverse Section of the Basilica,	22
18.	Church at Gernrode (ground-plan),	22
19.	Abbey Church at Königslutter (ground-plan),	24
20.	Church at Murbach, Alsace,	(*facing*) 24
21.	Church of St Godehard at Hildesheim (ground-plan),	25
22.	Attic Base,	28
23.	Base of Pier from the Church at Laach,	29
24.	Cushion Capital,	31
25, 26.	Capitals from St Godehard in Hildesheim,	31
27.	Capitals in St Jak in Hungary,	32
28.	Romanesque Forms of Capitals,	33
29.	Pier from the Church at Hecklingen,	34
30.	Pier from the Church at Gernrode,	34
31.	Romanesque Friezes in Faurndau and in Denkendorf,	35
32.	Round Arch Friezes from the Church at Schöngrabern,	36
33, 34.	Do. do. do.	37
35.	Romanesque Moulding Decorations,	38
36.	Abbey Church at Laach (exterior),	40
37.	Cathedral of Santiago de Compostella,	(*facing*) 48
38.	Cross Vault,	45
39.	Romanesque System of Vaulting,	46
40.	Gothic Pier,	47

FIG.		PAGE
41.	Cathedral of Spire (ground-plan),	48
42.	Forms of Pointed Arches,	49
43.	St George's at Limburg,	53
44, 45, 46.	Groups of Windows,	57
47.	Wheel Window,	58
48.	Fan Window,	58
49.	Half-Wheel Window,	58
50.	Trefoil Arch,	59
51.	Notched Round Arch at Freiburg,	59
52.	Horse-Shoe Arch from Göllingen,	59
53.	Doorway at Heilsbronn,	60
54.	Base of Pier,	61
55.	Capital of the Cathedral at Magdeburg,	61
56.	[illegible]	63
57.	Choir of the Church at Pfaffenheim,	64
58.	Transept of Freiburg Minster,	(*facing*) 64
59.	Cathedral at Halberstadt (transverse section),	68
60.	Gothic Window,	69
61.	Ground-Plan of Cologne Cathedral,	70
62.	Flying Buttress from Cologne Cathedral,	73
63, 64.	Capitals in Cologne Cathedral,	74
65.	Gothic Water Table,	75
66.	Gothic Finial,	75
67.	Gothic Crocket,	75
68.	Gable from Cologne Cathedral,	76
69.	Cologne Cathedral,	(*facing*) 80
70.	Gothic Window,	79
71.	Ground-Plan of a Window at Obermarsberg,	79
72.	Gothic Pier,	80
73.	Pier in Cologne Cathedral,	81
74.	Contour of the Vault Ribs,	81
75.	Contour of Windows,	82
76.	Gothic Window,	82
77.	Cusps,	83
78.	[illegible]	[illegible]
79.	Transverse Section of the Cathedral at Minden,	84
80.	Cathedral at Minden (ground-plan),	85
81.	[illegible]	85
82.	Fish-bladder or Vesica Window,	89
83.	[illegible]	89
84.	Late Gothic Branch Work,	91
85.	Capital from Ratzeburg,	94
86.	Capital from Jerichow,	94
87.	Arch-Frieze from do.,	94
88.	Frieze from Ratzeburg,	95
89.	Contours of Brick Piers,	95
90.	[illegible]	97

Fig.		Page
91.	Contours of Doorways,	99
92.	Gable of the Church of St Catherine at Brandenburg, (*facing*)	104
93.	Cathedral at Schwerin (ground-plan),	101
94.	Church of the Madonna at Munich (ground-plan),	101
95.	Monastery at Maulbronn (ground-plan),	106
96.	Ground-Plan of Marienburg,	110
97.	Hospital at Lübeck,	111
98.	Altar at Ratisbon,	117
99.	Altar at St Gervais at Maestricht,	119
100.	Altar-Table at Bâsle,	122
101.	Altar of the Cathedral at Ratisbon,	125
102.	Altar from St Denis,	127
103.	Altar from the Chapel of Mary in the Church at St Denis, (*facing*)	128
104.	Altar from the Church of the Augustines at Nuremberg,	131
105.	Altar from St Wolfgang in Upper Austria—(*Frontispiece*),	134
106.	Chalice in Wilten,	138
107.	Chalice from St Mauritius at Münster,	139
108.	Chalice from Kremsmünster,	140
109.	Chalice of St Remigius,	140
110, 111.	Chalices at the Monastery of Neuburg,	142
112.	Peristerium,	145
113.	Gothic Ciborium from Rees,	146
114.	Monstrance in Sedletz,	148
115.	Cover of a Book in the Treasury of the Collegiate Church at Essen, (*facing*)	152
116.	Romanesque Censer from Lille,	152
117.	Censer from St Mauritius in Münster,	152
118.	Censer at Seitenstetten, (*facing*)	160
119.	Manile from Herford,	153
120.	Wheel of Bells from Gerona,	154
121.	Vessel from St Mauritius near Münster,	155
122.	Cross of St Ponziano,	157
123.	Cross from St Mauritius at Münster,	158
124.	Cross of the Twelfth Century in the Soltykoff Collection,	160
125.	Gothic Cross,	161
126.	Reliquary Cross from St Lorenzo before Rome,	162
127.	Early Romanesque Reliquary,	164
128.	Shrine of The Three Kings at Cologne,	165
129.	The Ursula Chest at Bruges, (*facing*)	168
130.	Reliquary Monstrance from Klosterneuburg, (*facing*)	176
131.	Head from Bâsle, now in British Museum, eleventh century,	169
132.	Reliquary Arm from Cologne,	169
133.	Chandelier in the Cathedral at Hildesheim,	173
134.	Chandelier in the Catholic Church at Dortmund,	175
135.	Seven-armed Candlestick at Essen,	176
136.	Candelabrum in the Cathedral at Brunswick,	177
137.	Candelabrum at Werben,	178
138, 139.	Romanesque Altar-Lights,	180

Fig.		Page
140.	Chandelier at Oberkirchen,	181
141.	Wall-Light from Dortmund,	182
142.	Font in the Cathedral at Hildesheim,	188
143.	Font in the Church of St Catherine at Brandenburg,	(*facing*) 192
144.	Well in the Cathedral of Ratisbon,	191
145.	Tombstone from the Church at Nossendorf,	194
146.	Monumental Slab of Günther of Schwarzburg in the Cathedral at Frankfort-on-Maine,	196
147.	Monumental Slab in Bruges,	200
148.	Screen of the Magdalene Church at Troyes,	(*facing*) 204
149.	Ambon from the Minster at Aix-la-Chapelle,	205
150.	Pulpit at Wechselburg,	206
151.	Pulpit in St Stephen's at Vienna,	(*facing*) 208
152.	Reading-Desk at Aix-la-Chapelle,	207
153.	Organ of the Twelfth Century,	209
154.	Organ from the Church of the Alcada de Henares in Spain,	210
155.	Choir-Stall from Ratzeburg,	216
156.	Choir-Stall in Eimbeck,	217
157.	Choir-Stall in Ulm,	219
158.	Choir-Stall in Altenberg,	220
159.	Sacramental Shrine at Wiltenhausen,	(*facing*) 222
160.	Sacramental Shrine at Fürstenwald,	223
161.	Shrine at Cilli,	225
162.	Ceiling from St Michael at Hildesheim,	(*facing*) 232
163.	Glass-Painting in the Marienberg Church at Helmstadt,	234
164.	Glass-Painting from the Cathedral at Ratisbon,	235
165, 166.	Pavement from St Paul's in Worms,	240
167.	Doorway in the Cathedral at Santiago de Compostella,	(*facing*) 248
168.	Doorway of St Sebaldus' at Nuremberg,	248
169.	Bell at Lühnde,	256
170.	Station by Adam Krafft,	258
171.	Arcade in Peterborough Cathedral,	266
172.	Capitals in St Peter's Church, Northampton,	267
173.	Ground-Plan of Salisbury Cathedral,	269
174.	Pier in do. do.	270
175.	Base of Pier in do. do.	270
176.	Triforium in do. do.	270
177.	Part of Nave in Beverley Minster,	271
178.	Capital in Salisbury Cathedral,	272
179.	Capitals in Lincoln Cathedral,	272
180.	Part of Choir in do. do.,	273
181.	Window in Chapel of King's College, Cambridge,	274
182.	Timber Roof in St Stephen's, Norwich,	275
183.	Fan Vault of Chapel of Henry VII., Westminster,	276
184.	Doorway of Lichfield Cathedral,	276

EARLY CHRISTIAN BASILICAS.

I.

EARLY CHRISTIAN BASILICAS.

THE first Christian communities, who lived under the oppression of a hostile heathendom, were accustomed to assemble for the purpose of celebrating their religious feasts of love and remembrance, either in the dwellings of distinguished fellow-believers, or in the Catacombs, the underground burial-places of Rome. But as soon as Christianity was recognised and established by the Emperor Constantine (A.D. 313), the erection of buildings for the public worship of God was commenced.

At this early period the traditions of heathen Rome were followed in the manner of life as well as in the practice of art. It is no wonder, therefore, that they looked to ancient models for their churches also. The *Basilika*, the exchange and judgment-hall of the ancients, was adopted as in all respects the most suitable. These Basilicas were oblong buildings, with rows of columns on all sides, inclosed by walls. The space in the middle was generally without a roof, but was encircled by two stories of covered corridors or galleries. Here the market was held, and business transacted.

Attached to one of the narrow ends was a semi-circular platform, raised on steps (*tribuna*), which seems to have formed the seat of a court of justice.

The Christian architects adopted the general arrangement of the Basilica as their model, making, however, such alterations as were necessary to adapt it to its new purpose. There was a necessity for distinct places for the clergy and people, separate from each other, but still sufficiently connected. The priests, accordingly, took the great *tribuna*, named also from its shape *Concha* or *Apsis*, which, in consequence, became the *presbyterium* (seat of the priests). In the midst was erected the altar, over the grave of a martyr (of the so-called *Confessio*), and over this arose a Baldachin (the *Ciborium*), which could be closed in with curtains. Behind the altar, against the wall of the *tribuna*, were arranged the seats of the clergy, with the raised throne of the bishop in the centre.

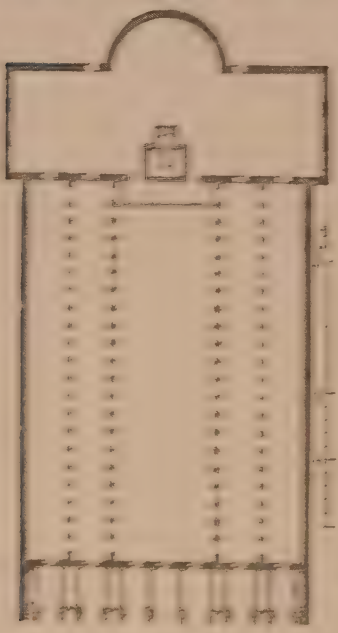


Fig. 1.—Ground Plan of St Paul's at Rome.

In order that the view of the altar might be uninterrupted, the columns which in the ancient Basilica had here separated the hall of merchandise from the

judgment-court, were removed. At the same time, the great central space (the *nave*) was covered over with a solid roof, the beams of which were overlaid

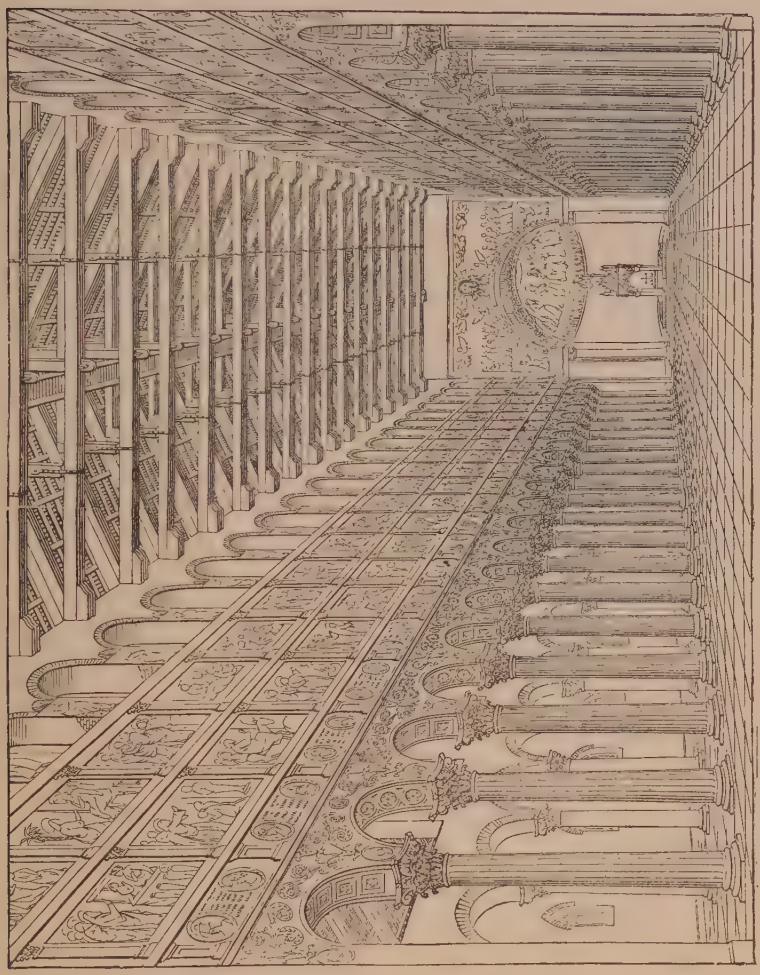


Fig. 2.—Interior of St Paul's.

with a ceiling. Afterwards the ceiling was omitted, and the rafters exposed to view. On both sides were

the aisles (on each side one, and in the larger Basilicas even two, as in St Paul's at Rome, Figs. 1 and 2), separated by columns from the nave, to which the tribune gave an imposing finish. But as the greater development of divine service seemed to render increased space desirable for the presbyterium, a transept between the apse and the nave was formed, extending the whole breadth of the nave and aisles, sometimes even beyond them, and thus the church received the form of a cross.

Lastly, at the end opposite the altar were the entrances, and a porch with a court (*atrium*) was added. Here the penitents had to wait; and here, in the midst of the court, rose the fountain, where the faithful on entering sprinkled themselves in token of inner purification. (In modern [Roman Catholic] churches the vase of holy water at the entrance serves this purpose.)

This was, in fact, the original design of the early Christian Basilicas. With regard to the interior arrangement, the side aisles (as a rule without a gallery, but sometimes with one) were about half the height of the nave. They were also covered with horizontal ceilings, above which rose the slanting roof leaning against the upper wall of the nave. Above this was a row of semicircular windows, from which the nave derived its light. Similar windows were also made or placed in the walls of the side aisles. The columns used were such of the numerous remains of ancient buildings as suited the purpose. When there was not a sufficient

number of one kind those of another were used, the difference of height being made up either by shortening the shafts or adding to the pedestals. Columns with *Corinthian* capitals were the most common. This very rich and elegant form (Fig. 3) is in the shape of a vase: two rows of finely-pointed acanthus leaves cover the mould, and between their spaces strong stalks shoot

Fig. 3.—Corinthian Capital.

out, which divide, and from which spring at the corners strong scroll-shaped limbs (*voluta*), and between them other weaker ones, but still scrolls. Another form related to the above is the *Roman* or *composite capital* (Fig. 4). It has the two under rows of leaves in common with the

Corinthian; but above these there is a heavy double *voluta* of a pompous character suitable to the Roman

Fig. 4.—Composite Capital.

love of excessive display. But most rarely is found the more simple *Ionic capital* (Fig. 5), consisting of a cushion with projecting rolls (the *voluta*).

Fig. 5.—Ionic Capital.

The columns were at first, like their ancient models, united by a stone entablature (the *architrave*), which in the Roman art was formed by three horizontal fasciæ projecting one over the other. Soon, however, a greater space between

the columns was desired, and at the same time a more powerful support to the superimposed walls ; the columns were therefore united by arches (*archivaults*), as will be seen in the representation of St Paul's at Rome (Fig. 2). The upper walls, but especially the upper parts of the apse, were decorated with splendid mosaic pictures on a gilt ground. The chief place for such decorations was, however, the *triumphal arch*—that is, the arch which formed the end of the nave at the transept. As a rule it rested on two projecting colossal columns, as may also be seen in Fig. 2.

While the interior, by the use of ancient remains, gave a rich and magnificent impression, the exterior remained simple and unadorned. The high walls showed neither life nor animation; at most, the cornice was adorned with ancient mouldings (Fig. 6), and the façade with mosaic pictures. However, these buildings, by their simple and often grand appearance, make a considerable impression on the beholder.

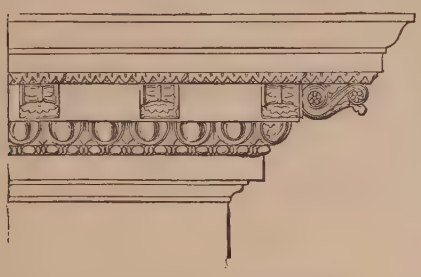


Fig. 6.—Ancient Cornice Moulding.

Ravenna alone, in some of its churches, shows some animation in the outer walls, having buttresses formed like pilasters united by arches. This is the case in the Basilica *S. Appolinare* (Fig. 7), which is also an example of the early addition of a bell tower, which the oldest Basilicas did

not possess, and which in Italy even later almost always stands *by the side* of the church. The early Christian Basilica form of buildings lasted from the time of Constantine through the succeeding centuries in Italy, as also in the other western countries which received from Rome its faith, its priests, and its art of church building. The Romanesque style, which first came into use about

Fig. 7.—S. Apollinare at Ravenna.

the year 1000, and began to replace the early Christian Basilica, put an end to that form of building. However, in Rome it remained dominant and unaltered until the thirteenth century.

Among the Roman buildings of this kind, one of the most important was the ancient church of St Peter, founded by Constantine, and only supplanted by the building of St Peter's in the sixteenth century. Not less considerable was St Paul's church outside the walls

of Rome, which, having been destroyed by fire in 1823, was lately restored. Both buildings had a nave and four side aisles. St Maria Maggiore has a nave and two aisles, also columns with architraves. St Agnese and St Lorenzo have a second story (galleries) over the side aisles. In St Clement's, for every three columns there is a pier; and in St Prassede, for every two columns a broad projecting pier, which, bound to the one opposite by great supporting arches, helps to strengthen the roof.

II.

THE BYZANTINE STYLE.

WHEN Constantine fixed his residence at Byzantium, which received from him the name of Constantinople, the building of Christian churches commenced there also. As in Rome, the Basilica formed the starting point, and it is certain that in the new imperial city Basilicas were not wanting, which doubtless differed little from those of Rome. Only in one point did the plan of the Basilica here receive a substantial modification, namely, in the galleries, which were placed over the side aisles. This was an arrangement necessitated by Oriental manners, for each upper story was kept especially as a *gynæceum* for the women. When we find this arrangement in Roman Basilicas, it arose from the influence of the Byzantine use of it. There soon, however, took place in Byzantium, from the united working of various causes, both outward and inward, another kind of building, which differed so much from the flat-roofed Basilicas as to form a completely new and original composition. The constructive fundamental element of this style of architecture is the vault, and more especially the cupola.

The Romans had also known and used cupolas. The Pantheon at Rome is still one of the most imposing works of this kind yet remaining. The cupola is in the form of half a hollow ball covering a circular space. Such at least appears to have been its most primitive form as it was in use among the Romans.

The cupola was developed differently at Byzantium. For as it was here to be brought into connexion with a complicated many-naved building, it was especially necessary that it should be raised high upon single supports. For this end there were arranged a number of strong piers—as a rule eight, but sometimes four—in a central position. These were then bound together by strong arches. On these binding arches was then raised an eight or four-sided upper building, in the corners of which were placed niches (*pendentives*). By this the preparation for the circle was made, and it could easily be completed by a strong ring-shaped circular cornice, from which would rise the cupola vaulting. To the chief cupolas were now attached, as a rule, smaller niches supported by columns. Next to these were ranged further on, on all sides, subordinated side spaces, over which was the gallery for the women. Now, whether the complete building formed a polygon, as St Vitale at Ravenna (eight-sided), and as the old Minster of Charlemagne at Aix-la-Chapelle (sixteen-sided, *vide* Fig. 8), or a square, as St Sophia and St Sergius and Bacchus (Fig. 9) at Constantinople, there was always a central structure, characterised by the great cupola with

its domineering mass of light coming through the circular opening of the cornice. Only on the east side an exception was made, by the apse which projected as a semi-hexagon on the exterior, being semicircular in the interior, while, as a rule, on the west side was placed an

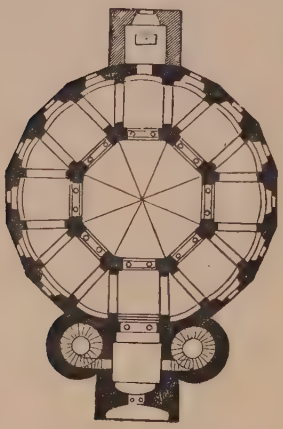


Fig. 8.—Minster at Aix la Chapelle (Ground Plan).

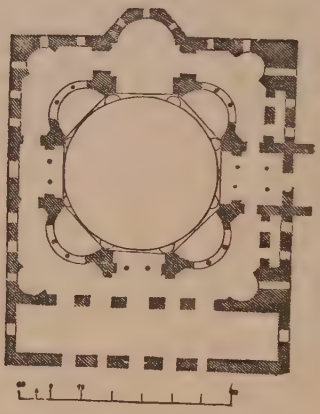


Fig. 9.—St Sergius and Bacchus (Ground Plan).

entrance-hall. These, as also the other subordinate spaces, were covered with smaller cupolas. It is the circular form of the cupola, protected by no particular roof, which gives the dominant impression to the exterior. In early times it was not customary to make the cupola of a perfect semicircular vault, but only of the segment of one; later, it rose even higher than a semisphere. However, the cupolas alone are not conclusive evidences of the Byzantine style, as other styles of building have often used this form; for we find it in Rome in Sta. Costanza and San Stefano Rotondo, and at Milan in the magnificent church of San Lorenzo.

But there these buildings form the exception, while here it is the rule. Lastly, they enter at Byzantium into a language of form which completes and distinguishes the Byzantine character.

The details of the Byzantine style are, indeed, in the first place, also based on ancient models, but they follow the Greek manner of treatment more than the Roman. This is shown especially in all ornament, which with the Romans was formed full, luxuriant, and even pompous, while with the Greeks it had a fine, sharp, and modest shape. In the Byzantine art, however, antique forms were very soon obliterated by a system

Fig. 10.—Capitals in St Vitale at Ravenna.

of drawing, which, although executed with great technical skill, was spiritless and insipid. This change appears principally in the acanthus leaf, and such a form covers the *flats* of the capitals and even the walls in certain places.

The *capital*, which for some time was really that of

the antique style, now received a specifically Byzantine form; for although it was made round below, but four-cornered above, the trapeze-shaped flat parts were surrounded by an ornamental border, while the inclosed surfaces received another kind of ornament. Besides this, on the capital itself was placed a trapeze-shaped

Fig. 11.—Capital from St Mark's in Venice.

block intended to unite capitals and arches. On the sides of the block are sculptured ornaments or symbolical emblems (Fig. 10). Capitals, however, are often found (Fig. 11) which come near to the ancient character of form, though freer in the manner of treatment. For the other parts, the details of this style were limited

Fig. 12. Church of St. Sophia at Constantinople. *See page 13.*

to a poor imitation of the Roman form, which is noticeable chiefly in the cornices of the interior and exterior. The decoration of the interior is magnificent: the walls are covered with marbles of different colours, and the vaulted roofs are resplendent with costly mosaics on a gilt ground.

Byzantine art reached its climax in the church of St Sophia at Constantinople, built in the reign of the emperor Justinian, between 532 and 537 (Fig. 12). This style of architecture lasted indeed many years later, and even outlived the fall of Constantinople, but it did not remain then so free from foreign influences, and besides had only minor problems left to solve. On this account the church of St Sophia remains the most valuable model we possess. But another arrangement was originated which came frequently into use, and was adopted in the West, as in the church of St Mark in Venice. Here, also, the body remained square, with a cupola in the middle; but it showed, at the same time, the section of a cross, called "*Grecian*," having arms of equal length, in opposition to the "*Latin*" cross with its chief arm lengthened, as is the case in the early Christian Basilicas. Generally, also, the four arms were shown by cupolas, but the middle cupola towered above the rest. Other churches, as the Theotokos (Church of the Mother of God) at Constantinople, had, besides the chief cupola, three cupolas, rather lower, over the broad entrance-hall.

The Byzantine style did not attain any further or higher development, and with few exceptions it had very little influence on the architecture of the East.

III.

THE ROMANESQUE STYLE.

(ABOUT 1000–1200.)

I. THE BASILICAS.

THE Romanesque style has, by a strange confusion of ideas, been for a long time called the Byzantine. There certainly was, and still is (as we have seen above), a Byzantine style, which has about the same relation to the Romanesque that the Greek Church has to the Roman Catholic. The Byzantine certainly took its elementary details, and, indeed, its fundamental forms of building, from Rome, as on the other hand we can discover in the Romanesque style elementary details coming from Byzantium; but in reality both styles are far separated from each other. The Byzantine was more special, while the Romanesque was truly "Catholic"—that is, it included generally the whole of the then Catholic world. But as those languages which were formed from the old Roman were special national transformations of the original language, so also did the styles of building which were developed from the forms of heathen Rome, and which were named

with a true analogy *romanesque*, receive many modifications among different nationalities.

Here we have again to treat of the same form from which all Christian church-building arose, namely, the Roman Basilicas. However, we do not intend to show the gradual development and alteration of the simple primitive form, nor can we even enter into the disputed question, whether the Christian Basilicas arose by alteration from the heathen Basilicas (the Roman Market and Judgment Hall,) or had an independent origin. We shall only concern ourselves with the perfect Basilica forms as we find them in Germany, from the eleventh to the end of the twelfth century. We certainly know, from history, of Basilicas of an earlier date, but we can point with certainty to hardly any of the tenth century, much less to any older ones. At first the churches were of little value, often being built only of wood. These were generally, in the course of time, displaced by finer and larger edifices built of stone. But even these, on account of the customary wooden ceilings, became an easy prey to the elements of destruction; and thus it is that we often know of the building of a church of the seventh or eighth century, but must take care not to consider the present one the original, as, with some few exceptions, which can be counted, *this is never the case.* The Christians could consistently retain the name "*Basilika*" (Royal Building), with reference to the "King of kings," to whom their churches were dedicated. The typical Basilica has a nave and side aisles: the nave broad and

high, the side aisles half as broad and half as high. These relations were retained, with few exceptions, in all the buildings of that period. The construction of the nave and aisles is as follows: Two rows of columns (or piers, of which hereafter) were placed at such a distance as was required for the width of the nave. Each row of columns (*arcade*) supports a high wall by means of the semicircular arch which unites every two adjoining columns. These two walls (the side walls of the nave) rise to the roof, which was built over them, rising rather steeply, in the form of a saddle-roof.

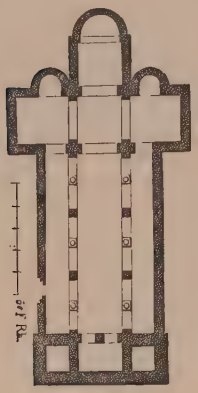


Fig. 13.—
Romanesque Basilica.

For the interiors of the church there were thus presented two very extensive surfaces, for the decoration of which various forms of art were used. One consisted in the *arcade moulding;* that is, a narrow horizontal *fascia* projecting from the surface of the wall, which went the whole length of the arcade arches. (Compare longitudinal section, Fig. 14.)

Fig. 14.—Longitudinal section of the Basilica.

Sometimes, not content with that, single *fasciæ* are

led from the columns supporting the arches until they meet the arcade moulding (*vide* Fig. 15). Another way was the arrangement of open archways breaking the wall and forming a kind of *gallery*. This gallery is mostly in connexion with a corridor running along over the side aisles, which was required in populous places by the increasing need and by the limited space. In Germany these galleries are numerous only on the Rhine; in other places they are very exceptional: for instance, St Ursula in Cologne, the Madonna Church in Coblenz, churches at Andernach, Linz, Sinzig, the great cathedral at Zurich, &c. Sometimes the wall of the nave is so divided that every two of the arcades are surmounted by a greater arch. This mostly takes place when weaker supports (columns) alternate with stronger ones (piers), for as the whole of the wall which is enclosed by the arch is of less thickness, the columns are partially relieved of the weight. This is to be found, for example, in the churches at Echternach near Treves, and also in many Saxon buildings, as in the churches of Huyseburg, Drübeck, and Ilsenburg.

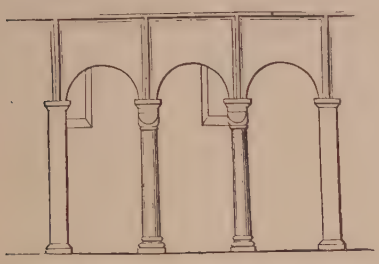


Fig. 15.—Arcades of St Godehard in Hildesheim.

Tolerably near to the roof is formed a row of windows, which give light to the nave.

These windows, up *to the thirteenth century*, are small, although during the twelfth they increase a little

in size. At that time they were without exception closed above with semicircular arches. The *scontions*—that is, the side walls of the window niches—were considerably sloped on the outside as well as on the inside, not only to let the rain run off easily, but also to let as much light enter the church as possible. The interior wall of the window, besides the surface between the window and the arcade moulding, offered space for wall-painting. In the richer development of the later Romanesque period, and especially in the second half of the twelfth century, we find, in the deepened angles which the window forms with the wall, one or even two columns introduced, from which moulded arches are continued above the window. (Fig. 16.)

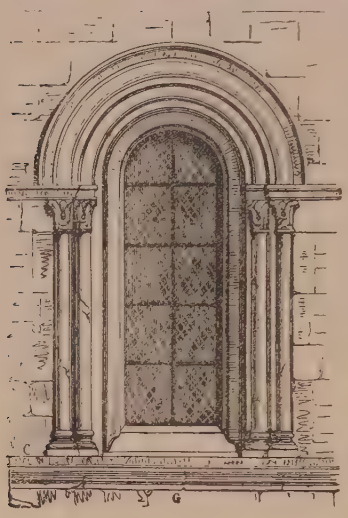


Fig. 16.—Romanesque Window.

The nave and aisles were covered in the earliest times either by an arrangement of beams, through which the complete roofing was seen from the nave (an arrangement not found in Germany), or else by a flat-boarded ceiling, which was used for painted decoration. Such wooden ceilings were general even in grand buildings, as St Godehard and St Michael at Hildesheim, even till far into the twelfth century. The last of these two

churches is the only one in Germany which has still preserved entire the ancient painted ceiling.

At the east end the nave and aisles were closed by three broad semicircular arches, the one closing the nave being of considerably larger span, and named *the triumphal arch.* Here the length of the church is broken by the transept. From the two piers supporting the triumphal arch, and on that account much higher than the arcade supports, extend towards the east two large semicircular arches, which are of the same span as the triumphal arch, and rest on two piers, or rather pilasters; and as these are again connected in the transverse direction by an arch, a square space is thus enclosed by the four arches forming the intersection of the arms of the cross. On its south, as also on its north side, is a similar square of the same height enclosed with walls; so that even on the exterior the transept was observable as it came out beyond the body of the church, and was of the same height as the nave. (Fig. 13.)

The choir was often carried forward into the middle space of the transept, and there enclosed by low walls, breastwork, or *balustrades.* The balustrades again afforded opportunity for sculpture and decorations of a very prominent character. On the outside, figures of the apostles are often found introduced, as if faithful guardians of the sanctuary; while the inside often shows figures of angels in the act of prayer, as in the magnificent church of St Michael at Hildesheim. Also towards

the nave it was customary to cut off the centre square of the transept by a similar screen, outside of which, towards the nave, was placed the altar for the laity, from which two steps lead to two desks (*ambons*), where the gospel and the epistle were read to the people; therefore the name *lettern* (*lectorium*) has remained in Germany for this balustrade. Such screens are found, for example, in the cathedral at Naumburg, and in the convent church at Maulbronn. (The so-called *apostelgang* in the cathedral at Münster is such a screen, but of later date, as is also the splendid screen in the cathedral at Halberstadt.)

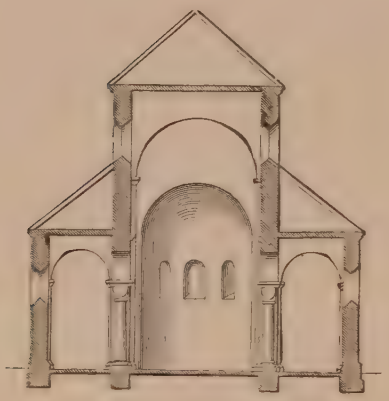


Fig. 17.—Transverse section of the Basilica.

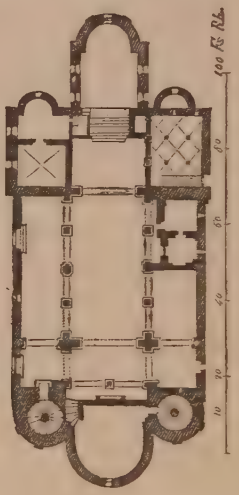


Fig 18.—Church at Gernrode (ground plan).

At the east end, attached to the centre square, and of the same height, was a raised rectangular space, often square, which in a certain manner was a continuation of the nave on the other side of the transept. This is the *choir* or the *presbyterium* (space for the priests). The

transept, as well as the other parts of the church, were generally flat-roofed in the earliest times. At its eastern end there was a space enclosed by a semicircular wall, forming an *apse*, and called also *niche*, *abside*, *tribune*, or *concha*. All these names were used, more or less often, for this part of the church. Towards the boundary of the apse and the square space of the choir stood the altar table, so that a passage was open round it, which was the more necessary, as the officiating priest originally stood *behind* the altar, his face turned towards the congregation. The wall of the apse is generally pierced by three windows, of the same form as the other windows, but generally of larger dimensions. The vaulting of the apse was adorned by painting, with the most splendid representations; mostly it was Christ as the Saviour of the world, and as the Judge of the world, enthroned on a rainbow in a vesica.

This is the simplest form of Basilica, as it came into existence in Germany after the eleventh century. It was, however, chiefly the east end which received the most varied additions. The commonest was the addition of two smaller absides (intended for side altars) to the side arms of the transept against the eastern walls. Often there was placed also on each side of the choir a side chapel, as it were a continuation of the side aisles (*vide* the accompanying plan of the Abbey Church at Königslutter, Fig. 19), which then terminates in a smaller apse. In some of the old churches it happens that the transept does not project far on both sides, but only just beyond the side aisles.

Sometimes also there is a similar simplifying of the plan of the choir by the omission of the chief apse, and the church is finished as a right-angled building. Especially so in Cistercian churches, as at Loccum, Marienthal, near Helmstädt, Lilienfeld in Austria, Neuberg in Steiermark; also in Westphalia, — and in the cathedrals of Paderborn and Osnabrück. As an example of the right-angled termination of the choir, a view of the church at Murbach, in Alsace, is given (Fig. 20): the nave and aisles no longer exist, while the transept has two towers. When the low aisles are continued as corridors round the choir, terminating either as a semicircle or with right angles, it forms an arrangement especially rich, though very rare in Germany. St Godehard at Hildesheim (Fig. 21) is an example of the former arrangement; the Cistercian Church in Marienthal, in Westphalia, of the latter.

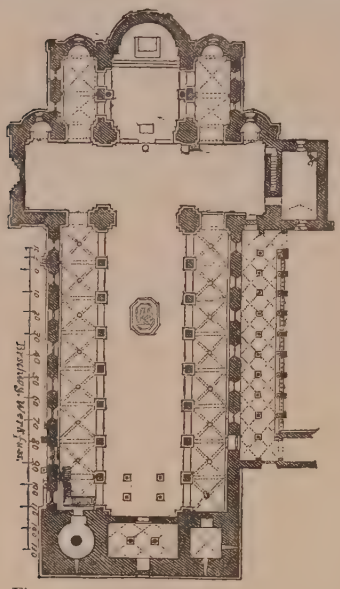


Fig. 19.—Abbey Church at Königslutter (ground plan).

There still remains to be mentioned a very important item, and one of the greatest significance in the construction of the Basilicas—namely, the *crypts* or vaults. In the olden times we find under the choir of all the larger churches a second church with vaulted roof

FIG. 20. Choir of the Church at Murbach, in Alsace. *See page 24.*

resting on columns or piers, having several aisles of the same height, with an apse and an altar in the apse. These crypts, possibly a remembrance of the catacombs in which the early Christians were obliged secretly to hold their meetings, were probably intimately connected with the festivals in remembrance of the martyrs. They had great influence on the plan of building, as by them the space of the choir was made considerably higher, and it was necessary to separate it from, and to raise it above, the rest of the church by a number of steps. The crypts differ considerably in size; the smallest include only the space under the choir and the chief apse, while the largest extend under the whole transept, as in the Collegiate Church at Quedlinburg. As a rule, the entrance to the crypts is in the front, between the steps leading up to the choir.

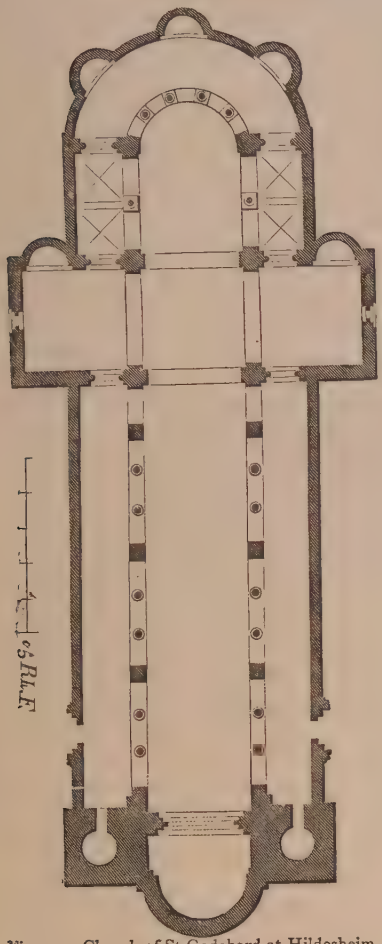


Fig. 21.—Church of St Godehard at Hildesheim (ground plan).

Another important addition was that of the *loggia* or *galleries*, which were mostly at the western end of the nave, resting on columns and piers with vaulted roof, and forming, as it were, a second story. The space under it was, as a rule, used as an entrance-hall. This *loggia* served either as a gallery for the nuns (as at the Collegiate Church of Gandersheim), or it was intended most probably as a place for people of note. Sometimes galleries are also found in one or both wings of the transept (as in St Michael at Hildesheim).

Lastly, it is to be remarked that sometimes in large cathedrals and abbey churches there is the addition of a second choir with apse, and even sometimes with transept, and a second crypt, which was dedicated to a particular saint, and probably intended for parochial service. Such is the case in the cathedrals at Bamberg, Menz, Naumburg, and the Collegiate Church at Gernrode (*vide* plan, Fig. 18); St Michael and St Godehard in Hildesheim (Fig. 21); St Sebald at Nürnberg, and others.

We have now to consider the supports of the arcade arches, in the arrangement of which there is great variety. They are either throughout columns or piers, or else a mixture of both. This mixture is also of various kinds; sometimes a column alternates with a pier (Fig. 13); sometimes two columns succeed one pier (Fig. 21). Basilicas with columns alone are to be found frequently in the south of Germany, but in the other parts more rarely. The most important are the convent churches at Hamersleben, Paulinzelle, Hersfeld in Hesse, Limburg on the

Hardt, Heilsbronn in Franconia, the cathedral at Constance, and the Abbey Church at Sekkau in Carinthia. As magnificent Basilicas with piers (latterly partly vaulted over), we may mention the churches of the Madonna at Halberstadt and Magdeburg, St Pantaleon, St Aposteln and St Martin at Cologne, the cathedrals at Augsburg and Würzburg, the collegiate churches at Ellwangen, and the cathedral at Gurk in Carinthia. St Michael and St Godehard in Hildesheim, the Collegiate Church at Quedlinburg, and several other churches in Saxony, have *two columns* between the piers. A favourite arrangement was an alternate column and pier, as in the churches of Gernrode, Hecklingen, Huyseburg, Amelunxborn, and others.

The terms *columns* and *piers* are often confounded by the laity. They are both alike in that they are independent members, standing alone, intended as supports; but the difference between them is great. The *pier*, in reality, has only *one* important part; for the *base* is mostly only an insignificant member of a few horizontal mouldings, and the capital, which finishes it above, is nothing more than an arrangement of several narrow horizontal members. Between these two parts, the capital and the base, the pier, as a rule, was formed as a rectangular piece of masonry.

The *column*, on the other hand, as it was formed in Christian architecture, consists of three equally important members—the foot (the *base*), the *shaft*, and the head or *capital*. The formation of the base is borrowed from

the forms of ancient Greek art, in so far as the *Attic base* (Fig. 22) is generally used. This consists of three members, bound together by narrow fillets, namely an upper (narrower) and an under (wider) *ovolo* or *torus*, between which is a fluted groove. Under these members Romanesque architecture places also a strong slab (plinth), which forms a simple four-cornered foundation for the base and column. The formation of these parts is, however, very different, either according to the degree of projection or to the height. There are Attic bases of steep and of flat formation. But as the art of the middle ages accepted and imitated no element of another style of architecture without alteration, but stamped on each form a completely special and specific spirit by transformation, so was it also with the Attic base. As where the under ovolo stands on the four-cornered plinth an empty space was formed at each of the four corners, on account of the round form of the ovolo, a small member like a peg or knob was placed in these corners to render the transition from the round to the square form gradual and more equal; this projected at the rounding of the ovolo, and was called the *spur ornament*. (Fig. 23 shows the most primitive form of this ornament on the central round part of the base, the remaining parts, the corner ones, being without one.) This spur ornament takes many forms. At first the two sides of the knob were spread out broader and thinner. Afterwards, as the inexhaustible ingenuity

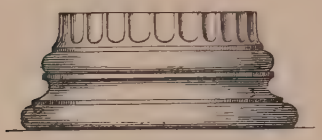


Fig. 22.—Attic Base.

of mediæval art never stood still, this corner ornament was enlivened with the forms of plants, leaves, and even of animals.

In general we can assert that the Attic base was formed steep until nearly the *middle* of the twelfth cen-

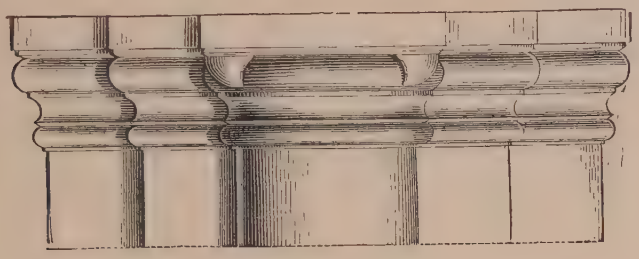


Fig. 23.—Base of Pier from the Church at Laach.

tury, but then it became gradually flatter, and as it were shrivelled up, until, in Gothic times, it appears simply as a narrow band. With this flattening of the base there generally occurs a greater protuberance of the round ovolo over the *socle* by which the spur ornament was supplanted. At first the base was always without the corner-leaf, and all Romanesque feet of columns which are found without it must be regarded as works of the early centuries, for it is only in the beginning of the twelfth century that the spur ornament first positively appeared as a sharply-turned knob, then more of the form of a socket, and at last revelling in all manner of forms of leaves and animals. *In the Gothic style it is not known.*

The *shaft* or stem of a column is circular in form, as the pier is square. Both forms, however, vary; so that

there are columns which are octagon or hexagon (but never square), and there are piers which are polygon and even round. Sometimes, the column shaft rises so as to show a cylindrical form of the same circumference above as below (a rather inartistic and rare form), and sometimes the stem diminishes (that is, it has gradually a smaller diameter) towards the top. We rarely find in ancient orders of columns the projecting entasis; that is, a swelling out of the shaft close to the base, succeeded by a sudden contraction and diminution towards the top. It is further to be remarked, that the shaft of the column, though mostly smooth, is often adorned with sculpture. It would not be possible to mention the number and the different kinds of these ornaments, as each day brought to light some new design. Still, the ribbed or fluted (parallel perpendicular carved stripes) are the most common, as well as the twisted ones, which again were of various forms, and the occasion of rich decoration. (See the columns in the doorway, Fig. 53.) Also, we must distinguish between shafts of columns, which consist of several pieces placed one over the other, and monoliths, that is, such as are hewn out of a single block of stone.

The *capital* consists of several members—the *neck*, the body proper (*the bell*), and the *abacus*. The neck is a small ovolo or torus which binds the shaft and capital together. It is mostly made smooth, but is sometimes ornamented. With regard to the proper form of the capital itself, it is very various. In the early times of Christian archi-

tecture, as the art of sculpture had somewhat decayed, the capitals of ancient heathen temples and of other grand buildings were borrowed. The capitals for the minster of Charlemagne in Aix-la-Chapelle, brought from Italy, are examples of this. But after some time the Christians themselves began to invent capitals, although at first they imitated the forms of the ancient styles. These were generally the *Corinthian capitals*, or rather that variety of it called the *Roman*, and seldom the simpler *Ionic*. These antique representations reach down as late as the eleventh century. However, in the course of this century was invented a completely new and original form, which is called the cubic or the cushion capital (Fig. 24).

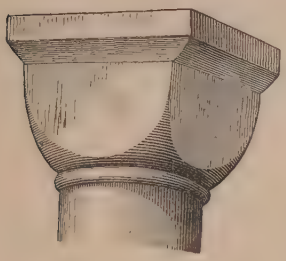
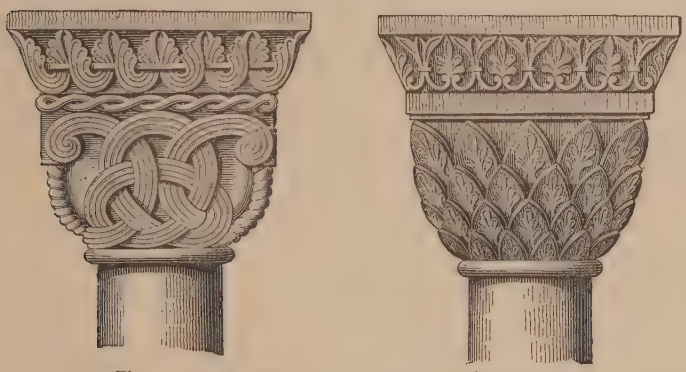


Fig. 24.—Cushion Capital.

If we conceive a cube broken off at the four lower



Figs. 25, 26.—Capitals from St Godehard in Hildesheim.

corners, and more or less rounded, we have the body of

this capital. Each of the four sides of it was then generally terminated below by a carved semicircular arch, so that there resulted a rounded panel, which was soon devoted to sculpture, to be adorned with forms of animals, strange monsters, forms of plants, and twisted or plaited riband-work. (Figs. 25, 26.) In considering the mediæval monuments, we must guard against believing that there is everywhere a special symbolical meaning in these and similar creations, as they are for the most part simply the spontaneous ebullitions of a free and exuberant fancy; especially towards the end of this period, when the

Fig. 27.—Capitals in St Ják in Hungary.

symbolical movement was more or less overshadowed by the artistic.

Besides this form, there are also many other forms of capitals, among which the most numerous are the bell-shaped and the cup-shaped (Fig. 27). Towards the end of the twelfth century we again meet with free imitations of the antique. But the capital is always one of the most prominent and favourite places for a rich and endless display of sculpture. The abacus is that member which finishes the capital above. The simplest form of the abacus is a square slab with an oblique slope (Fig. 28 *b*), which last is often enriched with sculptured ornaments. The forms of the inverted attic base are much used for the abacus (Fig. 28 *c*), or there

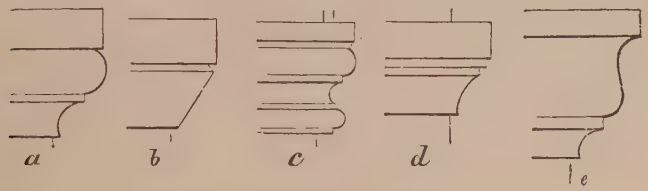


Fig. 28.—Romanesque forms of Capitals.

is a change from a concave to a convex moulding (as in Fig. 28 *a*), or the simple design of the slope is still further developed (Fig. 28 *d*). The form of the cornice, borrowed from the antique, of an undulating scalloped member united to the abacus and other subordinated members, is especially ancient. (*Vide* Fig. 28 *e*.) *All these combinations occurred in Romanesque mouldings.*

For fixing the time of the capital, it is to be remembered that in the early times (the Carlovingian period up to the eleventh century), forms in imitation of the antique occur; towards the end of this century the

cushion capital, simple, and also adorned in various ways, appears. By the side of it was introduced the bell-shaped one, until at last, towards the *close of the twelfth century*, a new but finer and richer transformation of ancient designs occurs. However, the cushion and the bell-shaped capitals remained in use until nearly the end of the Romanesque epoch.

In opposition to the rich and manifold decoration of the column which we have described, a more impressive form was soon also given to the *pier*. There were two principal designs which now came into use. The pier was either sloped at the corners, which became also a rectangular indentation ending as a groove (Fig. 30) at a little distance from the moulding of the impost and

Fig. 29.—Pier from the Church at Hecklingen.

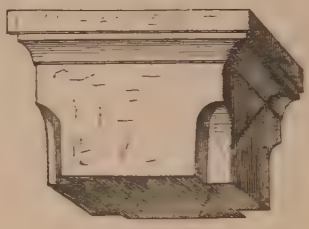


Fig. 30.—Pier from the Church at Gernrode.

from the base; or else small half or three-quarter columns (Fig. 29) were inserted in the corners of the piers. Many other variations of this kind are found in the buildings of the twelfth century.

Before proceeding further, it may be as well to mention here another member of a kindred nature. This is the *pilaster* or *wall-pier* (respond), a pier which, deprived

of its isolation, is built in a wall, and, like the isolated pier, serves as a support. Besides this, there is the corner column, which is nothing else than a column inserted in a corner of the wall; the half column, three-quarter column, quarter column, may be understood by their names.

Besides the capitals of columns there are other places, especially the moulded bands over the arcade arches, which were adorned with carved ornaments. These consist principally (Fig. 31) of riband interlacings, which are connected with a strictly formal leaf-work

Fig. 31.—Romanesque Friezes in Faurndau and in Denkendorf.

peculiar to the Romanesque style. The bands have often a diapered surface, as in the frieze of the Church of Faurndau. (See Fig. 31.)

The interior of God's house was the most important for Christians, for it served not only as the especial favourite dwelling-place of their God, but as a place of meeting for the Church. Therefore, in Christian Church building, the architecture of the interior was, and remains, the most important; the exterior, however, was soon also worthily decorated.

This took place first by trying to render the wall space more artistic, by breaking it up into compartments. A powerful *socle*, taken principally from the component parts of the attic base, forms the foot of the building: a *cornice* terminates the wall above. To give greater effect to this cornice, an appropriate decoration was soon developed, which seems to have been used for the outside alone; this is the *arch frieze*, or rather the *round arch frieze*. A row of semicircular arches, which are arranged by the side of one another, and connected with

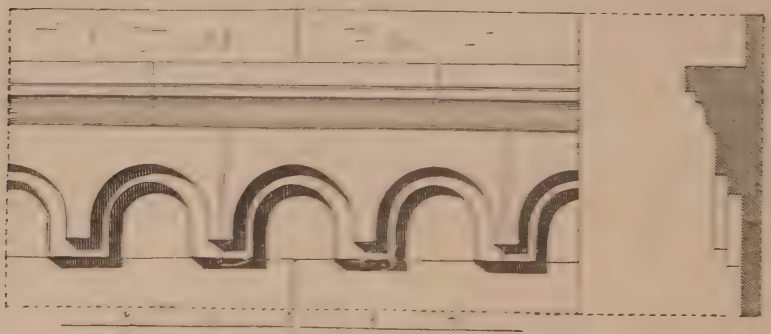


Fig. 32.—Round Arch Friezes from the Church at Schöngrabern.

an unbroken continuous member, form this frieze, which then received the most manifold treatment and refine-

ment. This is either arranged in the simplest manner by rectangular projections (Fig. 32); or the members are richly shaded by the addition of a round moulding (Fig. 33); or lastly, the single arches rest on a corbel, in which

Fig. 33.—Round Arch Friezes from the Church at Schöngrabern.

there often occurs a rythmic change in the treatment (Fig. 34). On the corners of the building, as also in cer-

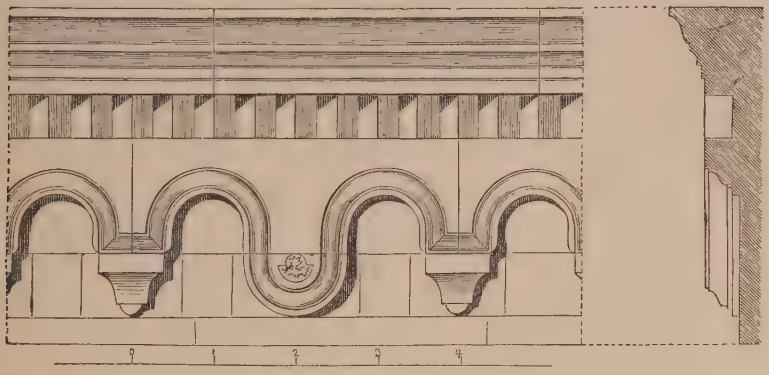


Fig. 34.—Round Arch Friezes from the Church at Schöngrabern.

tain spaces in the wall, are introduced wall fasciæ, pilaster-like buttresses, which unite the socle with the roof

frieze. Instead of these fasciæ, half columns are also used. Sometimes there is added to each arch frieze another frieze, a broad horizontal band, of square heights and hollows, arranged like a draught-board (Fig. 35 *a*), or a band of spade-shaped ornaments (Fig. 35 *c*), or oftener, though seldom in Germany, a zig-zag band (Fig. 35 *b*). These ornaments are also used in the interiors on imposts and other cornices. At last there was added to the round arch frieze (as in Figs. 33 and 34) a frieze of stones placed diagonally (or scalloped). The arrangement also of galleries, which, borne by columns, around the choir-apse, and even around the other chief parts of the building, was often used; though, in Germany, such galleries to churches seem to be known only in the Rhine country.

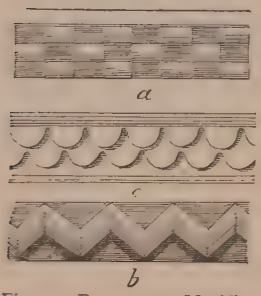


Fig. 35.—Romanesque Moulding Decorations.

The *entrance-doors* offered one of the most important places for the richer development of exterior architecture. The Basilica had several of them, although in the arrangement of them no regular, unalterable rule seems to prevail. We often find the chief entrance at the western end of the nave, in the middle of the western façade. There were other entrances in the two gable walls of the transept and each side aisle often had its own doorway. The actual opening of the doorway was usually rectangular, bounded above by a horizontal beam, the *lintel*. Above this was usually

introduced a semicircular arch, the *tympanum* of which was covered with sculpture in relief. Among these sculptures the most favourite designs are Christ enthroned on the rainbow in a vesica; often with angels at the side who hold up the vesica, or swing censers; often with the patrons of the Church at Christ's side; the lamb with the cross; the hand of the Lord raised in the act of blessing; Christ on the Cross; the fish as a symbol of Christ; the Lord with the foolish and wise virgins, &c. The jambs of the doorway have one or more columns built into recesses prepared for them. From the top of the columns there rise round mouldings (one or more according to the number of the columns), which, bending in a semicircle, enclose the tympanum. In some Romanesque doorways lions are introduced. The two columns at the doorways of the church at Königslutter, at Brunswick, rest on lions, likewise at St Gereon at Cologne. Although this seldom occurs in Germany, it is often met with in the noble cathedrals of Italy. It was erroneously thought that these lions were intended to show that the churches in question were built by Henry the Lion.

In many countries, the magnificent appearance of the western façade is noticeable. There are two square towers which rise up in front of the side aisles, united together by a low party wall. This erection between the towers, embracing the porch with its corridors, had a gable-end in the late Romanesque time, but it was made sloping in the Gothic. In the older churches, however,

this part had its own peculiar roof, which was built against the church, thus making the wall to terminate

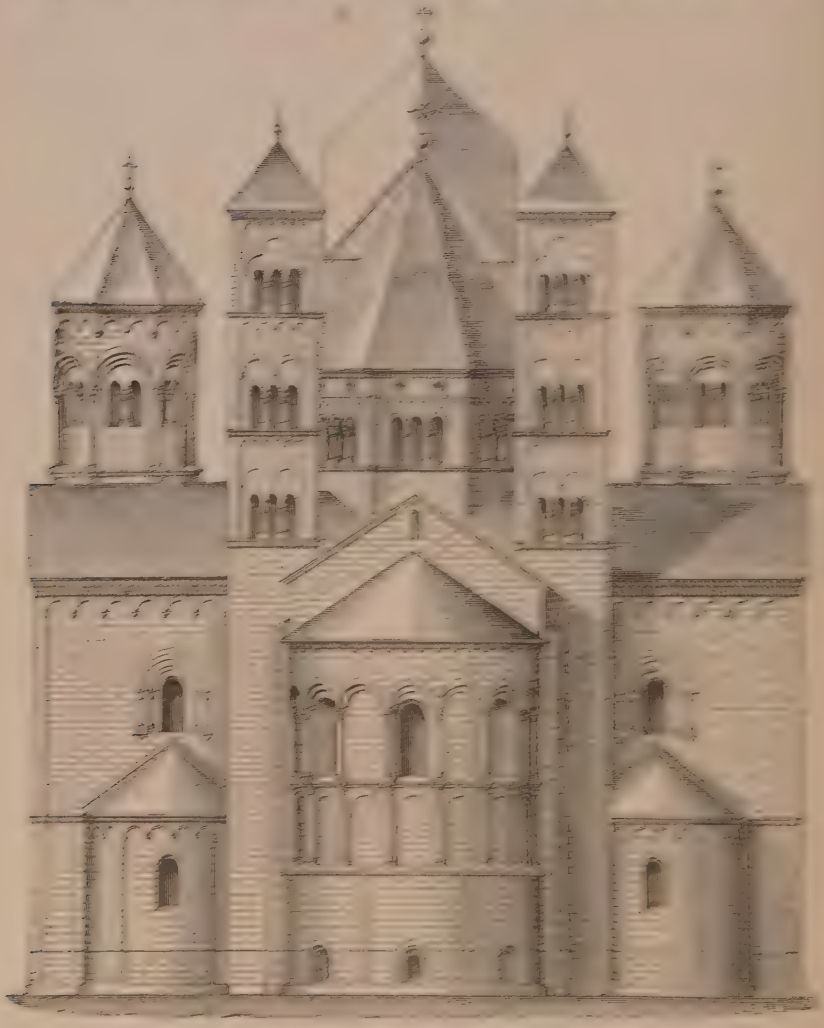


Fig. 36.—Abbey Church at Lanch (exterior).

horizontally. Often the towers have an octagonal roof, while below they are round and this is the oldest part

of the building. In more magnificent plans, it is customary to place an octagonal tower over the intersection of the nave and transept, or to introduce two towers on the side of the choir; even the side arms were often flanked with polygonal lanterns (towers with winding staircases). To give a sufficient representation of all these various forms, we give a view of the eastern side of the Abbey Church at Laach (Fig. 36), which serves especially as a pattern of a clear and moderate, but still an impressive, breaking up of the wall space. Here the choir is bounded by two square towers; and on the intersection of the nave and transept, there is a broad octagonal tower. This is the eastern group. The western side has a strong square principal tower, and to the gable walls of the second transept are two slender round lantern towers. Originally the towers themselves were without any architectural details, until later when the masses of wall were divided horizontally and vertically —the one way by mouldings and arch friezes, the other by wall fasciæ. The tower windows are at this time small, vaulted over by a semicircular arch, in which generally two smaller semicircular arches are constructed, which receive their central support in a small column more or less slender. The junction of the generally broad arch with the slender abacus of the column was mostly effected by a wedge-shaped member, *the impost.* The roofing of the tower was at first very simple, and consisted principally of a saddle-roof. The cross-roof—that is, two saddle-roofs transversely inter-

secting one another, is another favourite form in many parts of the country. It is found, for instance, in the Bustorf Church at Paderborn; and the cathedral there had one also, until the bad taste of later times changed it for its present roof. Another form which came much into use was the four-sided pyramid (or eight-sided, according to the form of the tower), which, at first short, became gradually more slender and tall. In the church at Laach (see view, Fig. 36), the two square eastern towers have a four-sided, the two round and the octagonal towers over the intersection at the transept a polygonal, pyramid roof. These are the real fundamental forms of the tower-roofs, which lead to many later modifications. For example, we often find on the Rhine a very beautiful form. The masonry of the square or octagon tower terminates above in as many gable triangles. Between every two of these neighbouring triangles a rectangle is introduced, which is at such an angle of declension that the single rectangles meet at a point at the top. (See, in the representation of the church at Laach, the western square chief tower.) Another form arises when the point of the chief tower receives four small collateral towers. The pyramid-shaped roof of the tower is called the *spire.*

2. DEVIATING FORMS.

We must next treat of the village churches, which generally have only a nave without aisles or transept, sometimes with aisles without a transept, or with a

transept without aisles; often with an apse, often without, with a simple rectangular end; also often with apses, which lie in the wall and which do not show outside. But the characteristics of the Romanesque style are always to be looked for in the thick walls, as well as in the semicircular vaulted openings of the doors and windows, and the smallness of the windows in relation to the mass of masonry.

An essentially deviating form is that which consists of a central structure with a cupola. It is found in various fundamental forms—round, square, or polygonal (such as hexagonal, octagon, decagon, dodecagon)—still it is but rarely that we find them in the west, partly as baptisteries, or as mortuary chapels, and partly for other purposes. Austria, especially Bohemia, possesses the greater number of these chapels. There are some at Mödling, several at Prague, at Tuln (elevensided), Znaim, Hartberg in Steiermark, &c.

Another very peculiar plan of building, met with in the early Middle Ages, and sometimes in the Romanesque time, is that of double chapels. We must conceive two chapels, one over the other, separated only by the cross vault. An indication of such a building is when an opening is left in the separating vault through which it is possible for those in the under chapel to attend to the mass held in the upper one. Such double chapels we find at Burgen, where the upper place is intended for the masters, the lower for the servants; or in nunneries, where the nuns took the upper one, while the laity,

mostly those belonging to the convent, found a place in the lower chapel.

The double chapels belonging to Germany, as yet known, are the borough chapels at Eger, Goslar, Nuremberg, Lohra, Landsberg, Freiburg, Coburg, Steinfurt in Westphalia, and the collegiate church at Schwartz-Rheindorf near Bonn, besides one at Vianden in Luxemburg.

3. VAULT BUILDING.

The simplest form of vault building is the *barrel vault*. It is nothing else than the complete union, in the form of a semicircle, of two *lines*, forming a semicircular arch. It can be easily understood by considering it as a halved cylinder. If there are two walls, which are united together by a barrel vault, and if the corners of the walls are united by two other walls, and these binding walls continued to the end of the vault, a semicircular filling up is the result. Such a barrel vault exerts a pressure on the whole expanse of the two walls on which it rests.

In the churches of southern France, as for example St Sernin at Toulouse, Notre Dame at Clermont, the cathedral of Autun, &c., the naves are roofed with such barrel vaults, and from these this manner of construction was introduced into Spain, where the cathedral of Santiago de Compostella (Fig. 37) offers a striking example of such a building.

The *cross vault* is formed in quite a different way (Fig. 38). This consists of two semicircular vaults crossing one another, and pressing against one another in

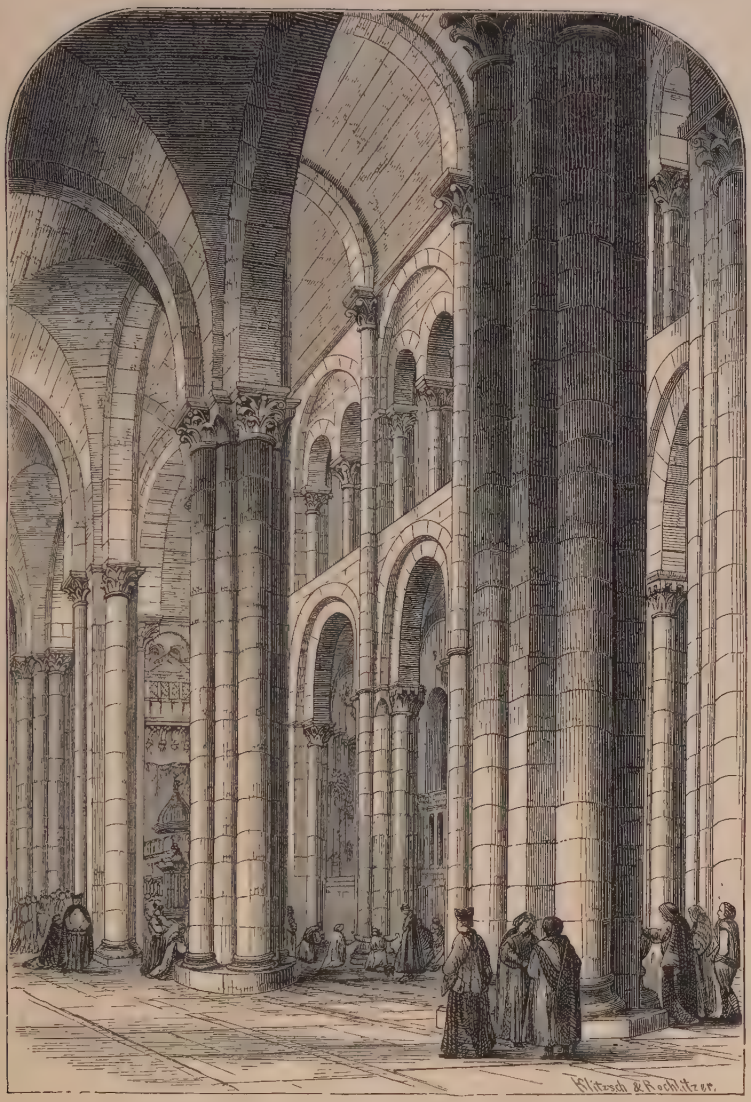


FIG. 37. Vaulted Roof of the Cathedral of Santiago de Compostella. *See page 44.*

opposite directions. There then remain four spherical triangles, forming a *groin* at the point of contact, and which, taken together, produce the form of a cross. The cross vaults do not need complete wall spaces or supports; they only require four single strong points—piers or columns—on which they rest. By these the lateral thrust, which in the semicircular vaults was borne by the whole wall, is here directed on single points.

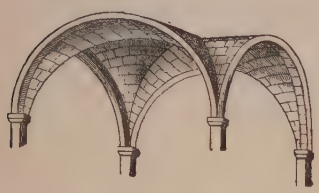


Fig. 38.—Cross Vault.

The cupola vault pre-supposes a round plan, and can best be considered as a halved ball. To erect the cupola on a square or polygonal plan demands complicated constructions.

Already in early times vault building came into use, but it had at first been principally employed for the crypts in the Basilicas. The numerous burnings by which the woodwork of the churches was destroyed, and which even destroyed the masonry, may have helped to bring about this improvement. The choir and transept were first vaulted over, where there were strong supports in the powerful four middle piers and the enclosing walls. There are churches, of the twelfth century, in which the choir alone is vaulted; others have vaults over the choir and transept, while the nave and aisles are flat-roofed; others have vaults in the low narrow side aisles, which thus serve as a stronger support to the high nave which has a flat roof. But then followed the vaulting of

the nave. Here more difficulties occurred. The two rows of low arcade piers were not capable of supporting the vaults. To obviate this, the other piers were carried up as pilasters to the wall heads, and thus strengthened the wall to resist the thrust of the vaults. (Fig. 39.) A binding arch was then thrown across from one pier to

Fig. 39.—Romanesque system of Vaulting.

the opposite one. When several piers were thus connected by binding arches, similar arches were thrown from pier to pier lengthways, and in this manner the binding arches formed a square, by which the filling up of the vault was easily accomplished.

Architecture was still further developed by the introduction of diagonal vault ribs. Thus it became possible, to make the vault, which before had been built of heavy quarry stones of one to one and a half feet in thickness, several inches thinner, and to con-

struct it of lighter materials, tuffa and bricks, and to treat it more as a simple filling up of the ribbed work. The point of intersection of the cross ribs (the *apex* of the vault) was developed into a round, often richly ornamented, *key-stone.* Later—(we must here anticipate, although it still belongs to the Gothic times)—this division of the vault went further, and led to *star vaults*, and still more complicated constructions. It is, however, here to be remarked, that all the cross ribs are not bearing members; in the late Romanesque times they are often found as simply ornamental ribs fastened on the vault.

With the development of the vault went hand in hand that of the vault supports, the piers. The pier, at first simply square, was now cornered or grooved out, and in the hollowed corners were placed small half columns and corner columns, from the abacus of which the cross ribs appear to come out, while the more powerful half or three-quarter columns placed before the pier sides serve as supports to the cross girths.

Fig. 40.—Gothic Pier.

At the same time, it may also be mentioned that the *intrados* of the vault—that is, the flat surfaces turned towards the interior of the church, in opposition to the *extrados*—were often covered with wall paintings.

The system of the vaulted Basilica came into use in Germany, as it appears, for the first time, towards the end of the twelfth century, and it is in Rhenish buildings that the

vaulting of the whole nave is first found. The cathedral at Mentz was apparently vaulted after the burning in the year 1081. The cathedrals at Spire and at Worms followed. About the same time (1093–1156) arose the Abbey Church at Laach. The rest of Germany, for the most part, persisted in the flat-roofed Basilica, and for the first time, in 1172, the cathedral at Brunswick gave an important example of the new style of building, which led next to the supplementary vaulting of flat-roofed churches (collegiate churches at Gandersheim and at Wunsdorf). We give (Fig. 41) a ground plan of the Cathedral of Spire, to render clear the arrangements in Romanesque vaulted buildings. On the Upper Rhine,

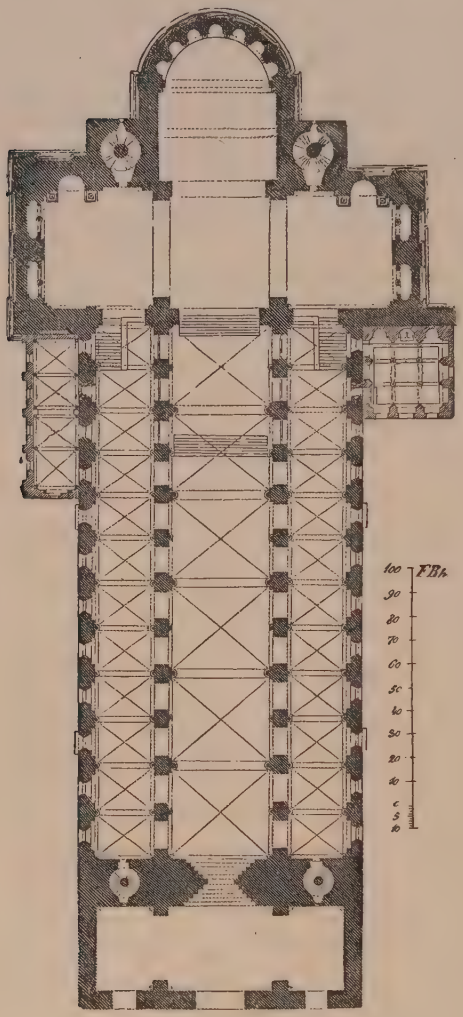


Fig. 41.—Cathedral of Spire (ground plan).

the churches at Rosheim, St Fides at Schletstadt, the Abbey Church at Murbach (Fig. 20), and the church at Gebweiler in Alsace may be named as specimens of vaulting.

With this new and magnificent development was connected, on the Rhine, the plan of a raised cupola over the middle square of the transept, which appears outside as an imposing octagonal tower. The transition from the square to the octagon was made by *vault niches*—that is, small pendentives in the four corners. These cupolas often received an upper light by means of a corona of windows in the inclosing walls.

Architecture experienced one of the most important transformations by the introduction of the *pointed arch.*

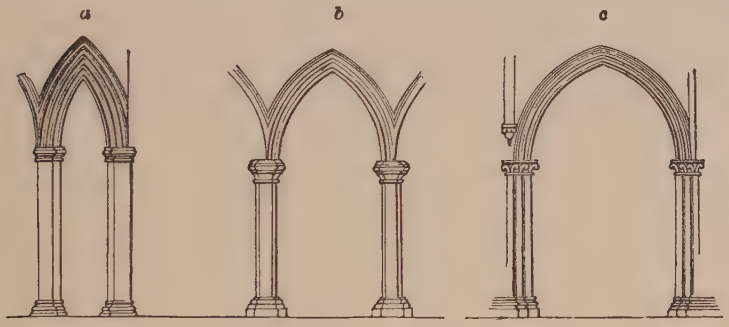


Fig. 42.—Forms of Pointed Arches.

If it was desired to unite two points by an arch, the semicircular one had been considered the only one possible. But if, instead of this, two segments of a circle were taken and placed with one end of each on opposite piers, the pointed arch was formed, and thus the possi-

bility was shown of uniting two points with one another at any height. The pointed arch was first *equilateral* (Fig. 42 *b*)—that is, one constructed on an equilateral triangle, in which the segments of the arch are described from opposite points of the base.

If the centre of the circle is between the two points at the feet (supporting points), a broadened pointed arch is the result (Fig. 42 *c*); if outside, the tall or lancet pointed arch (Fig. 42 *a*). While it is evident that there can be only one equilateral pointed arch between two points, the number of broad and lancet ones is illimitable.

After these new discoveries had been made in architecture everything was prepared for a new style, and this was the Gothic.

IV.

THE TRANSITION PERIOD.

(1200–1250.)

TOWARDS the end of the Romanesque epoch, many freer and even arbitrary forms mingle with those of the severer Romanesque style of building, and to the architecture which thence arose has been given the name of the "Transition Style," by which term it is intended to imply that the works of this kind form a transition from the Romanesque to the Gothic. But this is only correct in the chronological sense, as certainly in Germany these transition forms in many places preceded the Gothic style, though they often continued to exist at first by its side, and were only gradually supplanted by it. While in the north-east of France the Gothic proceeded from the various results of the schools of domestic building belonging to the Romanesque style, in Germany it appeared independently only as a second growth of the Romanesque style, which expanded brightly and richly on the Rhine, and this is what we are accustomed to call "Transition Style."

The chief mark of this epoch, which embraces the

first half of the thirteenth century, and in many countries continues beyond the *middle of the thirteenth century*, consists in a restless straining after new forms, and in the desire, very energetically worked out, to alter and modify the old ones. This is especially the case with regard to the chief constituent part of the Romanesque style, the round arch.

However, it is to be especially remarked that we have not here to do with a style which can be placed as an equal beside the Romanesque and the Gothic, but merely with one finding its place in the interior of the Romanesque principle of form, at first purely decorative, and only later constructive—that is, as a movement reforming the laws of construction. It cannot justly be said that there is a "Transition Style" in the former sense. The buildings of the transition style still contain Romanesque elements throughout, partly in their division of space and construction, and partly in their ornamentation. But they mostly betray a divergence from the old type of form on the one side, and a development of the idea of construction on the other. At the same time, they take up the foreign design of the pointed arch, even although it was only in a decorative, seldom at first in a constructive, sense.

Such transformations take place in the interior, while the exterior completely retains the pure Romanesque style. Outside, the round-arched doorways and windows, the round-arch frieze, the fasciæ in the old fashion, still predominate. On the other hand, the round-arched

arcades of the interior become *pointed arches*, but always in that primitive, *dwarfed*, heavy form of arch. It is thus, in the collegiate church of St George at Limburg (Fig. 43), where the arcades, galleries, and vaults show the pointed arch, while the small windows still retain the round. This was at first caused by no necessity, but merely called forth by the awakened desire for the new, and unaccustomed form. Still, there are cases where a practical necessity seems to have led to the adoption of the pointed arch. Such a one occurs in the Marienberg Church at Helmstadt, where the two arcade piers next to the transept are drawn nearer to one another than the others. It being required to form their arch as high as the other round arches, this could only be accomplished by raising its apex to the required height, and a pointed arch was the simple result.

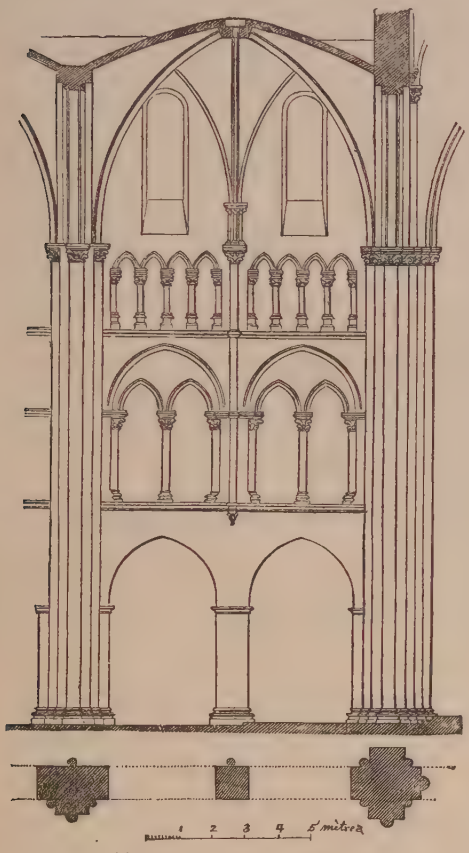


Fig. 43.—St George at Limburg.

By a similar necessity the pointed arch appears where

it is required to introduce narrower side aisles of the same height as the nave, an arrangement which is generally rare, but which we find in the earlier time frequently in Westphalia. In such a case the arcade piers (or columns), which were not also supports to the vault, were made of the same height as the others, and bound to them by arches (partly round, partly pointed), and then the groins of the two cross vaults were run along on them, so that that relation of the vaulted Basilicas was retained, whereby there were two small vaulted squares to each of the side aisles for one of the nave. Sometimes a halved cross vault was introduced instead of the double vaults of the side aisles.

These beginnings necessarily led to more important results, on account of the incredible desire for modifications at that time, which was accompanied by no less a zeal for building. The importance of the pointed arch for the construction of the vault was soon acknowledged. We must here call to remembrance what has previously (*page* 44 *and following*) been said on the development of the Romanesque vault-building. Strictly speaking, the whole remodelling belongs to the "Transition Style," as we have there already shown that the gradual formation of the ribbed system of vaulting was an introduction to the Gothic. In fact, this development of the vault occurs at the time claimed by us for the "transition." For it was easy to draw together the apices of the ribs and of the binding arches, so that often we find in the same building, round and pointed binding arches; and, indeed, mostly so that the former predomi-

nate in the eastern parts of the choir, while the latter are adopted in the transept, nave, and aisles. We often also meet with pointed arched vaults, and round arched arcades. It is evident that the building had been already continued beyond the height of the arcade arches when the new form suggested itself. Still, it is always to be borne in mind that the pointed arch of the transition style is the heavy, stunted one.

The intrados of the arch were still often blank, quite undeveloped, smooth flat surfaces answering to the pier surfaces from which they arose. But the introduction of round members on the piers and in the corners of them led to a continuation of the rounded mouldings throughout the arch, as we have already explained in page 46; and this is to be considered the real moment of the transition epoch. Besides, the piers were sometimes scooped out at the corners, and in them was placed a half column and a three-quarter column, a contour which had been occasionally adopted in the palmy days of the Romanesque style, but which was now often introduced in the arcade arch.

In many countries, however, about this time the vaults were produced quite differently. While, in fact, all the other forms of the transition style had been adopted, the vault was still built of heavy stones, nearly fifteen inches thick; whether it was because the taste for constructive development had not yet so far advanced, or what was more probable, that the light tuffa, which was used henceforth for the filling up

of the vault spaces was dispensed with. But, to keep up the appearance of complicated vault construction, many ornamental ribs, crossing in different ways, were laid on, which generally met at the apex, and there ended in a keystone, which was ornamented in various ways with shields and knobs. These ornamentations of the flat spaces of the vault, which betrayed the desire of the time for an organic alteration in the construction, would naturally, unless the vault was carefully examined, lead us to expect that vaults were constructed on ribs. In Westphalia I have found many examples of this.

When this first stage was past, the spirit of alteration seized on those parts of the building which had previously been undisturbed—namely, those which were observable from the exterior. The further development of the *window* was the richest in its results. In the flat-roofed Basilicas, the windows of the nave were divided at equal distances apart in the space of the wall. When the vaults were introduced, an alteration immediately took place, as the windows had now to be placed in such a manner that each bay had a window. As, however, by this the openings for light became too few, every two windows were arranged beside one another in the bay, and thus *groups of windows* came into existence.

The transition time, which found these groups already in existence, retained them, but began to make the end of the windows pointed. This pointed arch in many of these buildings is very little different from a semicircular one. At the same time, the windows were

made deeper, which had the effect of considerably lengthening the windows in the transept, as well as in the side aisles, which were of the same height as the nave. However, there was too much of dead wall space, and the enlivening and membering of this had to be thought of. Thus soon every three windows were arranged together, of which that in the middle was higher than those at the sides. (Fig. 44.) When near to one another, they were connected by columns, which were continued as arches, thus forming a complete frame to the windows. (Fig. 45.) After this, a step further was made by putting together two narrow windows, and introducing in the wall space, between the

Fig. 44.—Groups of Windows.

Fig. 45.—Groups of Windows.

Fig. 46.—Groups of Windows.

window arches, a trefoil, or a round window, and inclosing such a system of windows by a pointed arch. (See Fig. 46, in St Gereon, Cologne.) How nearly they approached the form of the pierced Gothic windows is evident; the principle being the same, for already

the walls inclosing the windows had been made thinner, and it was necessary to do so, on account of the artistic construction of the vault—a treatment which was adopted most boldly in the Gothic times. The rich, handsome *wheel windows* or *roses* (Fig. 47) belong to this period.

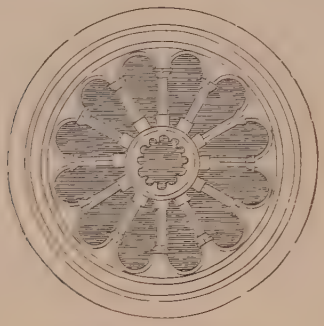


Fig. 47.—Wheel Window.

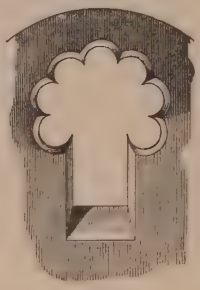


Fig. 48.—Fan Window.

They are great circular windows, divided into many parts by tracery work in the form of spikes, which meet in the centre of a circle or other figure. They are usually found over the western doorways, and were similarly used during the Gothic times; often, also, over the doorways of the transept wings. A rarer form of window is the so-named *fan window* (Fig. 48), an ordinary narrow window, the upper part of which is enlarged in the form of a semicircle with cusping. In the church at Neuss, and in other Rhenish buildings, such windows are in the galleries and in the upper wall of the nave. Lastly, we also find, especially in Rhenish churches, a halved wheel window (Fig. 49), if the upper wall of the nave is not high enough for taller windows.

Fig. 49.—Half Wheel Window.

On the doorways at this time that rich development was continued in use which had been characteristic of the best days of the Romanesque style. However, even in this alterations were made; the round arch was deviated from, as it had been already in the arcades, the vaults, and in the windows; and the trefoil, which was now coming into use, became a favourite form to be used here also. Its centre member was often formed round, and often pointed. (See Fig. 50 *a* and *b*, and the handsome portal in a chapel at Heilsbronn, Fig. 53.)

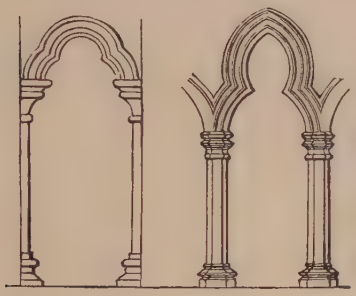


Fig. 50.—Trefoil Arch.

A form very rarely used is the horse-shoe arch, borrowed from the Arabians—that is, a round arch which is continued beyond its usual base, thus forming more than a semicircle. It is found, for example, in the crypt at Göllingen. (Fig. 52.) Another form, also derived from the Arabian style of building, is the round arch with

Fig. 51.—Notched Round Arch at Freiburg.

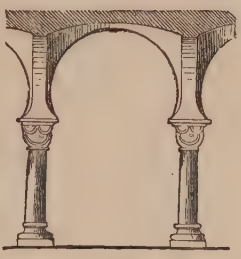


Fig. 52.—Horse-Shoe Arch from Göllingen.

small round notches (Fig. 51), as it is to be found in the

entrance-hall of St Andrews at Cologne, and in the Castle Chapel at Freiburg on the Unstrut.

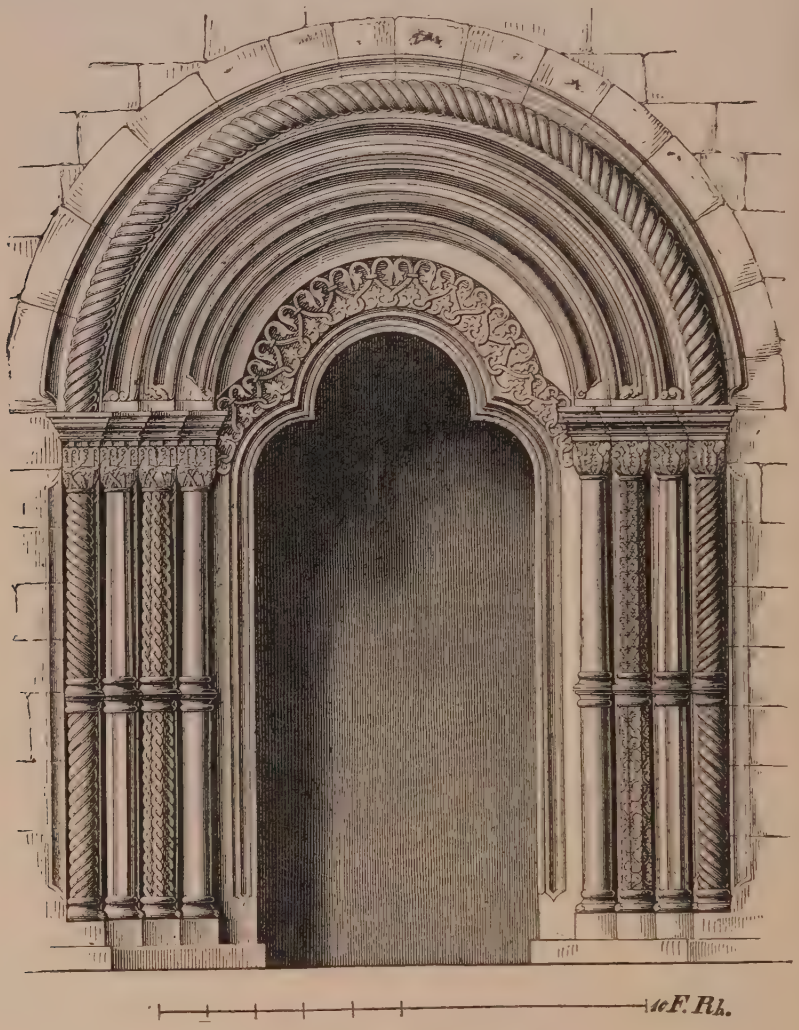


Fig. 53.—Doorway at Heilsbronn.

At length, even the cornice mouldings experience an improvement. The small round arches are changed into

pointed or trefoil arches. In brick buildings, also, a round arch frieze is so arranged, that the arches cross one another, and thus produce pointed forms. These memberings make an especially rich form of outline. The columns, as well as their continuation on the door and window mouldings, at this time often received rounded ornaments, which were repeated in certain places. An example of this is given in the portal at Heilsbronn. (Fig. 53.)

In the ornamentation, the features of the last days of the Romanesque time were retained. Still, we find a contraction and expansion of the several members taking place, principally of the bases (Fig. 54) and the capitals, while the last often took a lengthened bell-like shape, and were distinguished by the great dignity and the beauty of their floral decoration. Especially referring to this last stage of the transition period, are those capitals which are formed of several leaf-shaped knobs on long stalks, one above another. (Fig. 55.) And even the free leaf-work of the Gothic, taken from nature, is to be found, in single instances, in the transition buildings.

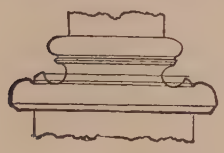


Fig. 54.—Base of Pier.

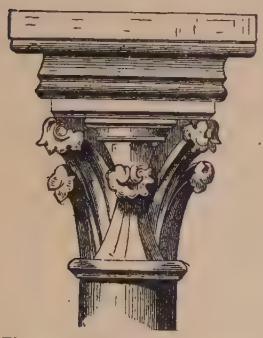


Fig. 55.—Capital of the Cathedral at Magdeburg.

All these modifications have taken place without disturbing the Romanesque character of the division of space; but we sometimes find (Fig. 57) that the apse

of the choir is formed as a polygon, often retaining its semicircular form in the interior, but often completely carrying out the polygon. For here also the simple unbroken round line no longer sufficed, when once the principle of a strict organic membering of the mass had been adopted. By this last step, the round arch was completely set aside in building. In the Gothic period, the pointed arch was introduced as the ruling principle in everything.

With regard to the time of this epoch, which we have already given, it is especially to be remarked, that the transition forms were only used in many countries for a few years, while in others, they remained dominant for more than half a century. This circumstance is to be explained by the varying characters of the different nations, as well as by their position outside of what was then the special world of action.

It will be no wonder to any one, that in the north of France and in England, the transition period lasted but a short time, and that there even in the last half of the twelfth century they built in the Gothic style, while in Germany they were still deep in the Romanesque; that except that the Rhine countries followed first, the Gothic style of building extended quickest in the lands on the coast of Germany, while the inland countries, such as Westphalia, Middle and South Germany, and Austria, were much later in adopting it. In Westphalia, for example, the development of Middle Age architecture was nearly half a century behind that of the Rhine. In considering and in

judging of Middle Age buildings, we must think of all these circumstances which render it difficult to get the exact, although we can arrive generally at approximate, dates.

This epoch, as we have said before, has its golden

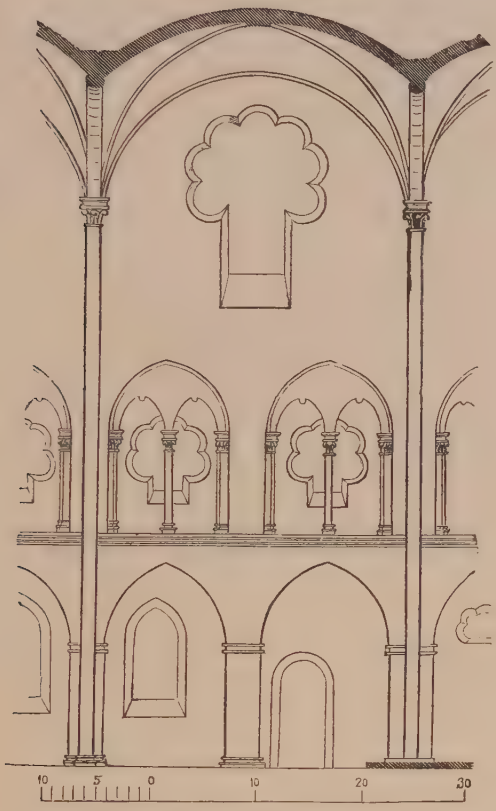


Fig. 56.—System of Vaulting in the Quirins Church at Neuss.

age in the Rhine countries. We find there, also, in many churches, the arrangement of *galleries* over the side aisles, as already mentioned, page 19. But even where such galleries are not met with, the upper wall of the

nave above the arcades was ornamented with blind arches on columns, which were often in connexion with narrow passages running along in the solid wall. The view of the nave of the Quirins Church at Neuss (Fig.

Fig. 57.—Choir of the Church at Pfaffenheim.

56), shows a gallery which is connected with a corridor. At St George at Limburg (see Fig. 43), besides the corridor gallery, there is also a small upper gallery of blind arches.

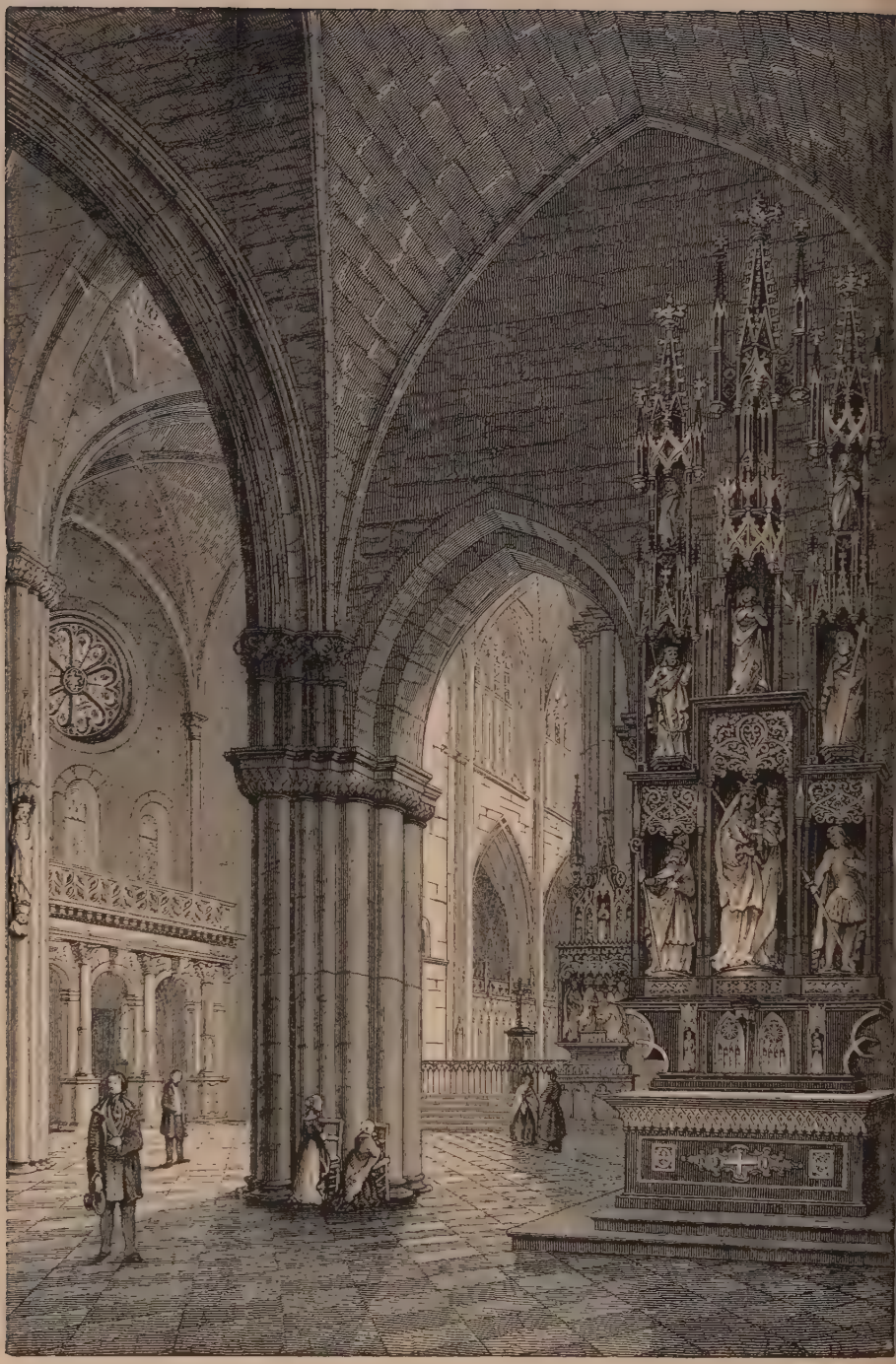


FIG. 58. Transept of the Minster of Freiburg. *See page* 65.

The most distinguished buildings of this time are the choir and transept arms of St Martin and the Apostles at Cologne; the minster at Bonn; the choir of the church at Pfaffenheim in Alsace (Fig. 57); the abbey church at Heisterbach; and the transept of the Freiburg minster, part of which can be seen in the accompanying illustration (Fig. 58); and the church at Gelnhausen; the cathedrals at Naumburg and at Bamberg; the St Michael Church, and the façade of St Stephen's at Vienna, with its giant door; the abbey church of St Jak in Hungary, with its fine portal, unique of its kind; the churches at Tischnowitz and Trebitsch in Moravia.

The transition style took another direction in Westphalia. Although there are examples there of a similar style, such as the cathedrals at Münster and at Osnabrück, still they are only exceptional; while the general plan was that which has *the nave and aisles of an equal height*, one already adopted in former epochs (see page 57), and called in Germany *hallenkirchen*.* The cathedral at Paderborn, the minster at Herford, and, in a smaller degree, the church at Methler, are interesting specimens of this form of building, which afterwards had so great an influence on the development of German architecture.

* The term "Hall Church" will in future be used to designate this kind of church.

V.

THE GOTHIC STYLE.

(1225-1525.)

THE SYSTEM.

WE have first, in a few words, to justify a name which sounds so unsuitable, when applied to a style of which the ancient Goths had no share in the development. In modern times, the awkwardness of the name being acknowledged, it has been proposed to put some other in its place. The English as well as the French have claimed the style as their "national" one, and in Germany this example has been followed, and it has been tried to christen it the "German," "old German," or the "Germanic style." Unjustly so: for although its most consistent completion was reserved for the German genius, the north of France is really the country where this style originated. We may, therefore, retain the old name, which, at first given by the Italians as a name of derision, has become a name of honour.

Modern investigations have resulted in the conclusion that the Gothic style first appeared in the *Isle de France*,

in Paris, and its neighbourhood during the last thirty years of the twelfth century. Thence, in the same century, it crossed into England, where there still exist several important buildings of the period, one of which is Canterbury Cathedral. (The choir A.D. 1174–1185.) But the new style of building very soon also found an entrance to the Rhine, and the first Gothic building on German ground is the nave of St Gereon at Cologne (A.D. 1212–1227). In the Magdeburg Cathedral (begun A.D. 1211), the Gothic principle is unmistakably adopted, but Gothic art appears to have been carried out first in its completeness in the Madonna Church at Trèves (A.D. 1227–1244), and in the Church of St Elizabeth at Marburg (begun A.D. 1235); and then was commenced the most magnificent building that the Gothic style has ever produced in Germany, Cologne Cathedral.

The chief tendency of the Gothic style is to render every part thinner and more extended—a tendency already observable in the pointed arch which now is alone dominant. We have already (page 49) shown the constant significance of this new form of arch. It was acknowledged that by using the pointed arch, the thrust of the vault was directed on one single point, and that low down, and so the thick walls of the earlier times could be dispensed with, if care was taken to give a sufficient support to this point. Something similar had already taken place in the developed Romanesque vault building; for there the strong and powerful pier, jutting

inwards with the pilasters, formed really such a support. This was now strengthened (see Fig. 59) by the *pillared buttress*, a strong rectangular pilaster, which was placed on the outside. As, however, in the large churches, the low side aisles were retained, such buttresses were placed against the outer walls of these parts of the building, especially in such places where in the interior they

Fig. 59.—Cathedral at Halberstadt. (Transverse section.)

formed the supports of the vaults ; then less strong ones, resting on the interior piers, against the nave. However, as these could not be built strong enough, ascending arches, *flying buttresses*, were formed from the point of the buttresses of the side aisles to the top of the nave, so that the stress of the vault was directed by them upon the exterior buttress. To lighten these arched but-

tresses as much as possible, they were pierced with many decorative forms of a varied kind; and their upper border was ornamented with stone flowers. Besides this, the water, which came down from the high roof, was led in a conduit through the flying buttress and collected in the gutter. The rain-water flowed off by the *gurgoyle* attached to the outer buttress, which was mostly in fantastic shapes of animals.

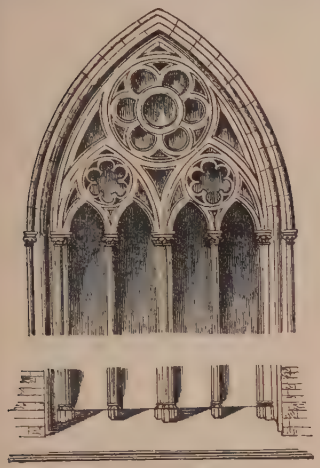


Fig. 60.—Gothic Window.

Another important alteration was the omission of the square form in the plan of the interior space. While each pier used as a support to the vaults and the other piers was made of an equal height, the difference between the arcade piers and the vault piers was discontinued, and the piers were now placed so near to one another, that each vault of the nave formed a long parallelogram, the longer sides of which were those across the nave, while the shorter sides were about three quarters of the size of the larger ones. (Fig. 61.) By this, not only did the perspective view receive the richest and most varied animation, but also it was proportionately easier to break up completely the spaces of the walls between.

This was done, by placing large handsome windows in the spaces which, on account of the size and breadth,

had to be divided by stronger members than the simple lead. This was effected by leading up from the foot of the windows several stone staves, *mullions*, which branched off above in various kinds of interlaced figures (*tracery*). The simplest of these figures were the three leaved (*trefoil*), and the four leaved (*quatrefoil*). There are also five leaves, six leaves, &c. However, in lofty churches, the important part of the wall, behind which was the roof of the side aisles, was left bare. The galleries lying in the walls were often placed here, consisting of arches resting on columns. They are called *triforia—three openings*—because the original number of these openings were three. Often,

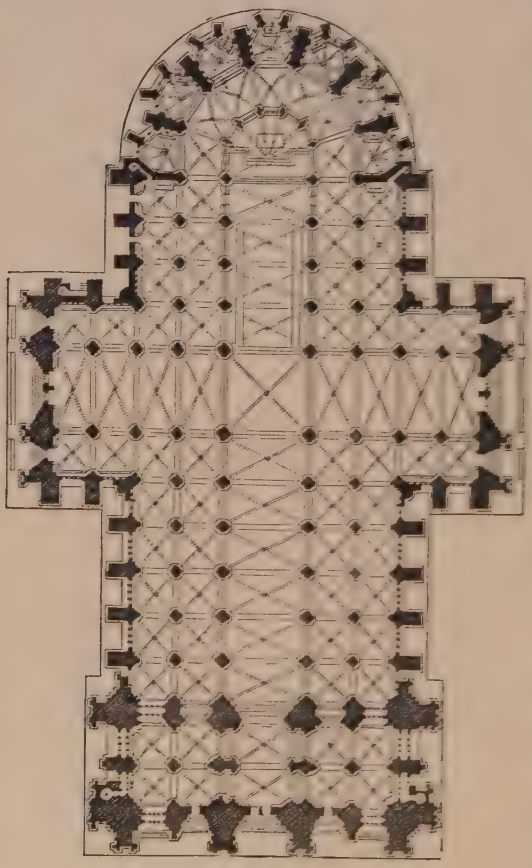


Fig. 61.—Ground Plan of Cologne Cathedral.

however, these triforia are only blind, being merely carried out in relief as a decoration on the wall space.

The ground plan, especially, was considerably changed. The arrangement of the choir was, in fact, so altered, that the crypts, which appear to have come in towards the end of the twelfth century, were done away with. With few exceptions, *there are no crypts later than the thirteenth century*. The choir was then raised only a few steps above the nave, and shut in on the other sides as well as towards the nave by stone screens, which were erected with great ornamentation and splendour. Instead of the floor of the choir being much raised, as was usual before, it was now the vault which was raised, and, in fact, so much so, that it attained the height of the nave, and thus the same line of roof was continued from one end of the building to the other. The polygonal arrangement of the choir, which had already been tried in the transition period, was now carried out, principally in such a way, that three sides of an octagon were adopted, as in the cathedral at Meissen, St Sebald and St Lorenz at Nuremberg, and St Stephen's at Vienna. However, five sides of a dodecagon are also found, as in the cathedrals of Cologne, Prague, and Magdeburg, the minster at Ulm, and the cloister church at Altenberg, near Cologne ; or seven sides of the decagon, by which the choir is extended beyond the side aisles, as in the meadow church at Soest, and the market church at Hanover. However, the number of sides must be unequal, in order that a side, and not the angle of two

meeting sides, should form the termination. However, this last does occur, as in the Church of St Bartholomew at Kolin, the Tayn and the Karlshofer church at Prague, the east choir of the cathedral at Naumburg, and the choir corridors of the minster at Freiburg. In the larger buildings, the side aisles were often continued as corridors round the choir (as in the cathedral at Halberstadt); sometimes even the choirs have four apses, outside of which the choir corridors run round as small polygonal chapels. The cathedrals at Cologne, Prague, and Magdeburg, the minster at Freiburg, the cloister churches at Altenberg, near Cologne, and at Marienstatt, in Nassau, have this most perfect arrangement. In connexion with it, there is often a nave and four side aisles, as in Cologne Cathedral, and (without a transept and the circle of chapels) in the collegiate churches at Xanten, the minster at Ulm, the Church of St Peter and St Paul at Görlitz. The transepts in such important buildings are mostly retained, and even furnished with side aisles; however, the transept is often wanting in the Gothic churches of Germany, even in important buildings, as, for example, in the minster at Ulm, St Stephen's in Vienna, and in the collegiate church at Xanten. On the other hand, the Romanesque churches of Germany never have the nave with four side aisles, unless it be that later additions have been made, as in the cathedral at Brunswick. The two outer aisles are often only rows of chapels, which have arisen from the supporting piers being drawn into the building, or, what comes to the

same thing, the outer line has been connected by a wall, which then forms the inclosing wall of the whole building; but we do not find this until the later Gothic times.

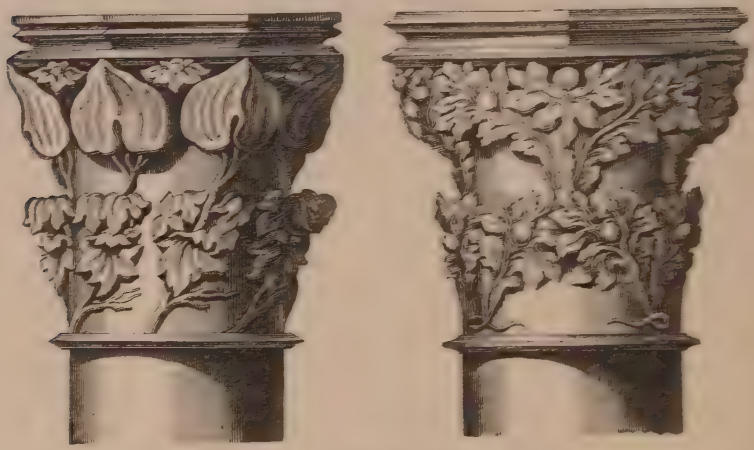
However, where a perfect arrangement of a nave and four aisles was chosen, it was necessary to carry out more fully the system of supports. For this purpose (see Fig. 62), supporting piers had also to be erected on the piers between the two side aisles, and to be connected by arches with the upper wall of the nave; as also with the supporting piers of the outer wall, and even these arches had to be doubled, on account of the considerable height of the building, so that at each point there are *four supporting arches.*

Fig. 62.—Flying Buttress from Cologne Cathedral.

For the ornamentation, it is to be remarked that the capitals return completely to the vase shape. This has become as peculiar to the Gothic style as the cushion shape has to the Romanesque, and like that, it generally appears bare. However, when it is ornamented with flowers and leaves, &c., they differ essentially from the Romanesque ornaments. In the latter, it was as if the ornaments grew out from the interior of the capital, but here the ornamentation of flowers and leaves are loose, but fastened on the outside of it. If the one consisted

in a more typical alteration of the forms of nature, the other strives to be a true imitation of it. (See Figs. 63 and 64.)

A great change was effected in the character of the interior, by the disappearance of wall-painting from the sides of the walls (although it was still used for the painting of the architonic members), and by the appearance of glass-painting in the windows. The character of this



Figs. 63 and 64.—Capitals in Cologne Cathedral.

glass-painting, often wonderfully beautiful, is the conception of a piece of tapestry hung before an opening; therefore, the designs are mostly those of tapestry, but single statue-like figures under canopies are introduced.

The formation of the *pilaster buttress*, and of the *flying buttress*, gives a characteristic charm to the exterior. The simplest form of the buttress is that of an upright pilaster, diminishing at intervals, ending at the roof cornice, and then terminated by a sloped covering.

Such sloped coverings are also found at the several intervals, arranged in such a way as to let the water run off. The outline of this water table (Fig. 65) contributes to this result, as it consists of a right-angled slope, with a deep indenture and a small outward curve. This form of outline occurs in all the outer mouldings. But sometimes the buttress is terminated by a gable roof, which is often ornamented on the top by a finial (Fig. 66), and on the gable ends by peculiar stone flowers, knobs, little balls, or *crockets*. (Fig. 67).

Fig. 65.—Water Table.

Fig. 66.—Finial.

Fig. 67.—Crocket.

As, however, the buttress is the most important object for the decoration of the exterior, they were not satisfied with it alone, but in rich buildings, instead of its roof, a pinnacle was used, the top and sides of which were ornamented with flowered crosses and crockets. Often the buttress was hollowed out, and in the niche thus formed was placed the statue of a saint. The top column or pinnacle, which consists of the body —that is, the lower horizontal part, and the spirelet (called in German *Riesen*, from the old German word "*risen*," "*reisen*," to rise), on the pyramidal point, is

profusely used on the exterior. They serve especially as a finish to the rich pointed gable, which is everywhere introduced where a pointed arch protrudes on the exterior, with an especially bold outline, as in the window below. (Fig. 68.) The arch is here protected by a steeply rising gable placed over it, the surface of which is ornamented by scroll work, and its sides by crockets, and on its top a finial is displayed. The line of the roof cornice is generally crowned with an isolated gallery formed of open net-work.

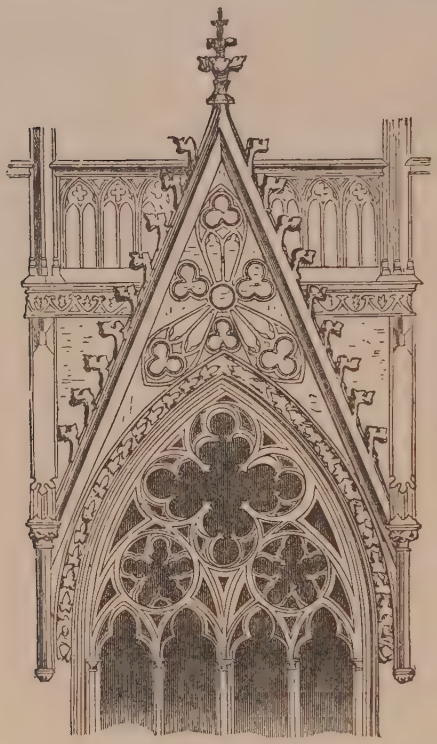


Fig. 68.—Gable from Cologne Cathedral.

The large pointed arched doorways are made still richer and more handsome than in the Romanesque time, while their surfaces are enlivened by a varied change of projecting and retreating members, the hollows of which are filled up with statuettes of saints on brackets and under canopies. The tympanum is also often decorated with pictorial representations. Sometimes a pier is placed in the middle of the larger door-

FIG. 69. Cologne Cathedral. *See page 77.*

way, on account of the wide span of the arch, and thus a double entrance was gained.

In this time, the arrangement of the towers is often especially magnificent. As a rule, we find at the west end two strong square towers, which become octagonal above, and sometimes end in a point of open tracery, united by a gable. This is the case in the cathedral of Magdeburg, Strasburg, and Cologne. (Fig. 69.) This is unquestionably the most beautiful form, and one best suited to the organising of the whole. Sometimes there is only *one* tower, as in the minster at Ulm and Freiburg. On the other hand, the towers disappear from the Eastern sides, or from the transept wings, as well as from the transept intersection. In collegiate churches is found, however, at the intersection, a so-called ridge turret. The constructive principle of the Gothic is to be seen also in the towers. If the Romanesque style adheres in this to its massive arrangement of walls, and raises them as high as possible, the Gothic style forms its towers of powerful supports, between which lie less strong spaces of wall, pierced by large and wide windows. The supporting piers are developed above in the richer examples of this kind, as isolated pinnacles with slender points.

In the last place, it is to be remarked, that in Germany the arrangement of a *nave and two side aisles of an equal height* was generally adopted during the Gothic period. But we will give fuller particulars below.

These are, in fine, the main points of the Gothic style. The distinguishing marks of the various epochs will be told in a few words, but we can only approximately fix the dates, for it must be remarked, that it is especially in the Gothic that the most varied differences are found in rapidity or slowness of progress among the different nations adopting it. The Romanesque style was much more easily extended, as the reception of Christianity led, as a necessary consequence, to the adoption of the only church style then existing in the West. Gothic art, on the other hand, was a renewal, an extremely appropriate and still further development of the earlier forms, which, starting from a certain point, had in many places for a long time to fight against the ancient manner of building, which was once in general use. The dates, in what follows, are thus only of an approximate character. In many countries, Gothic art had reached its zenith, while in some it was still employing the crabbed forms at first introduced; and in others, the Romanesque style was yet in use. Certain arrangements, as, for example, those of the later orders of the Franciscans, and of the Dominicans, which followed the greatest simplicity, retained for a long time the severer forms, while others soon did homage to the degenerating taste. All this must be well considered.

FIRST EPOCH.

(A.D. 1225–1300.)

The different periods of Gothic art are most surely

recognised by the formation of the *mullion work of the window* and of the *tracery*, by the *vault supports*, by the vault *ribs*, and by the independent ornaments.

In the early use of the Gothic style, the *mullions* are still formed as *round columns*, and have above at the point where the arches spring, capitals, which often have Romanesque ornaments. (Fig. 70.) The tracery consists likewise of *round* continuations of the mullions, and is made up of the simplest forms. The centre of it is generally formed of a large circle, in which tracery or foliations are constructed. All these forms still point to the Romanesque time, and have something awkward about them here. The large *rose* and *wheel* windows over the west portals are still in use. In broad windows more powerful mullions were used, consisting of bundles of columns, as well as weaker ones of single columns, so that the former, known as the "old"

Fig. 70.—Gothic Window.

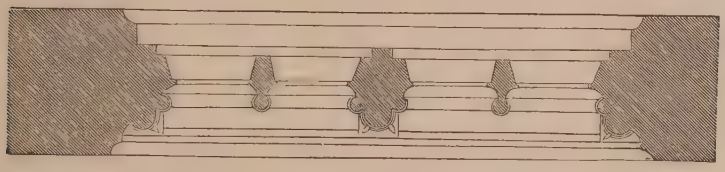


Fig. 71.—Ground Plan of a Window at Obermarsberg.

mullions, formed the chief division of the window, which was again subdivided by the latter, the "modern" mullions. (Fig. 71.)

The piers are heavy round piers, against which are

placed four strong three-quarter columns, for the support of the arcade arches (*separating arches*), and of the transverse ribs of the vault. Between these are then placed four other weaker ones, for the support of the cross ribs. These vault bearers are called *bowtels*, in Germany *Dienste*,—the strong ones "old," the weaker "young." In plain buildings, there are also round piers without bowtels, or the "young" bowtels rest at half the height on brackets. All the bowtels are also equally thick, and there are never more than eight together.

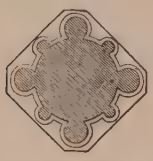


Fig. 72.—Gothic Pier.

The pier experienced a further development in that the bowtels alone were brought forward, and the parts of the pier lying between were hollowed out. The base of the pier was an octagonal, or rather a polygonal socle, from which rise the single bowtels, with socle members, especially polygonal. Narrow bands, repetitions of the attic base, unite the two parts of the socle with one another, and with the pier and its bowtels. (Fig. 73.)

The vault ribs have also often a round contour, while the transverse ribs and arcade arches are often formed of several round members, as they require to be stronger. The commencement of the peculiar Gothic rib work is already found here—that is, ribs which are, in fact, round, but have a scoop out in the centre, which gives to a section of one the form of a heart or pear. (Fig. 74.)

The ornament at length enters into a strict imitation

of certain natural forms, of the foliage of native trees and plants, as, for example, of the oak, the ivy, the laurel, parsley, and the like.

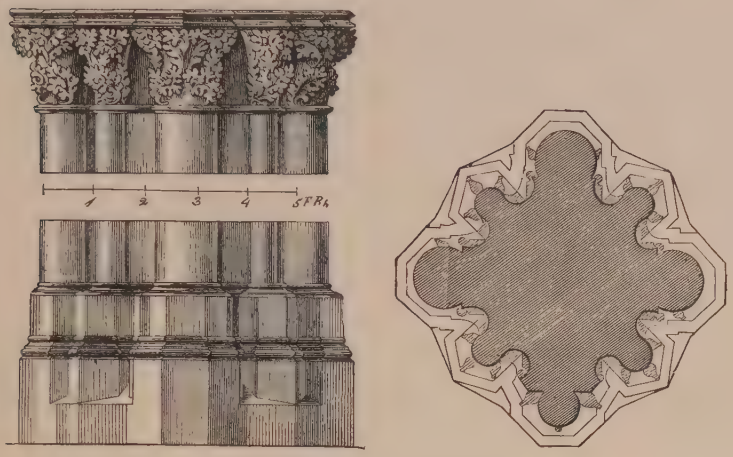


Fig. 73.—Pier in Cologne Cathedral.

The works of this epoch are not numerous in Germany, but among these we may mention the nave of St Gereon at Cologne, the Madonna Church at Treves, the Church of St Elizabeth at Marburg, the choirs of the cathedrals at Magdeburg, Meissen, and Cologne, the abbey church at Altenberg near Cologne, the naves of the minsters at Strasburg and Freiburg, the cathedrals at Halberstadt and Minden, the Church of St Catherine at Oppenheim, the churches of the preachers and barefooted friars at Erfurt, and the nave, aisles, and towers of St Lorenz at Nürnberg.

Fig. 74.—Contour of the Vault Ribs.

SECOND EPOCH.
(A.D. 1300–1375.)

The last remnants of the Romanesque principle of building are in this period energetically put aside, and all parts and members of the building subjected to the new conception. At the same time, the rough primitive forms of the first period are softened into forms most noble, most tender, and most symmetrical.

The windows received other contours, while the mullions, instead of being made up of round members, take a *more straitened formation*, in which both the sides, drawn in the shape of grooves, are bordered by a fillet, with or without an astragal. (*Vide* Fig. 75.) The bases, as well as the capitals, are done away with, so that the mullions spring direct from the sill of the window as slim stems, and branch off above with the same profile into the figures of the tracery. These last consist in this period of pointed arches, which are enclosed by a larger one : the pointed arches are mostly constructed from an equilateral triangle. (Fig. 76.) In these subdivisions are introduced the figures of the tracery, which at this time are purely

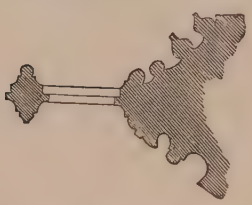


Fig. 75.—Contour of Windows.

Fig. 76.—Gothic Window.

FIG. 78. Interior of Cathedral of St Stephen's, Vienna. *See page* 83.

geometrical, principally trefoils and quatrefoils. Between the foliations project separating members, *nasen* (noses) in Germany called, on account of their shape, cusps, by which each figure of the tracery is defined. (Fig. 77.)

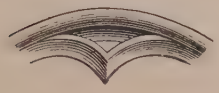


Fig. 77.— Cusps.

The piers retain their former shape, but gradually they are developed more richly, and varied changes are enlivened by sharply-protruding and deeply-indented members. The pear-shaped section appears always clearer and more elastic in the *vault ribs*, and the same design, still richer, is also dominant in the broad separating arch of the arcades.

The ornamentation in this period attains its highest beauty and noble freedom of treatment, with an imitation of nature, which, however, in no way damages the principle of architectonic membering.

Germany is rich in works of this epoch. Among the most important are the choirs of the minster of Aix la Chapelle, and of the cathedral at Prague, the cathedrals of Frankfurt-on-Maine, and of Ratisbon, the church of St Bartholomew at Kolin, the nave of the abbey church at Altenberg, the minster at Colmar, and at Weissenburg at Alsace, the nave and aisles of St Stephen's at Vienna (Fig. 78), and the Barbara church at Kuttenberg in Bohemia.

The arrangement of nave and aisles of equal height, which occurred about this time in Westphalia, and especially in the northern countries of Germany, brings many modifications with it. The character of the church

becomes more like that of a hall, the system simpler and more superficial. (See the transverse section of the cathedral at Minden, Fig. 79.) The high roof still appears as an external defect, which the arrangement of galleries and of several side gables only partially covers. The piers are now led up slim and high, and terminate in a moulding cornice, to which is attached a

Fig. 79.—Transverse Section of the Cathedral at Minden.

capital for the minor shafts. Their base is polygonal, but often, especially at this time, the shafts have special polygonal pedestals on the general base. The *windows* are considerably lengthened, and the mullions are often, for greater strength, united at half the height by tracery work like a gallery. The termination of the choir is varied according to the destination of the church. In mere parish churches, the nave and aisles are mostly terminated by three polygons. In convent and chapter

churches, the nave has a continuation from the lengthened choir beyond the side aisles, which, on their sides, end either polygonally or rectangularly. The termination of the choir in all epochs of Gothic art is rectangular in ordinary, as also in many convent, churches.

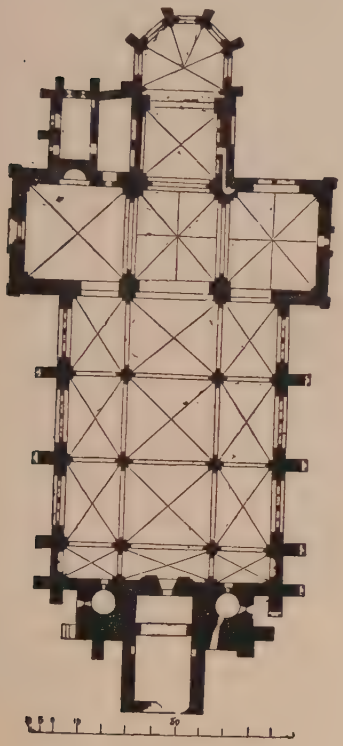


Fig. 80.—Minden (ground plan).

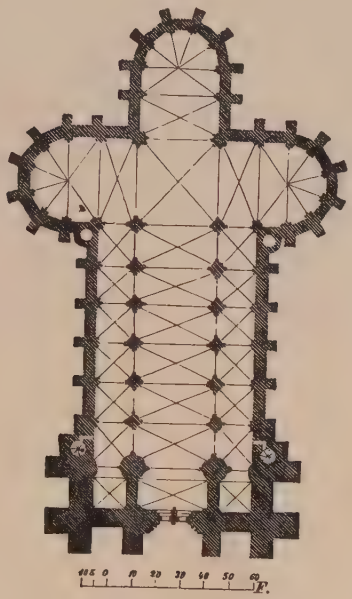


Fig. 81.—Marburg (ground plan).

The earliest Gothic hall church in Germany is the Church of St Elizabeth at Marburg, the building of which belongs to the first epoch. The nave of the cathedral at Minden, of which we have already spoken, cannot be much later. For comparison, we give (Figs. 80 and 81)

the ground plans of both churches, where the wide arrangement of the piers apart in the Minden Cathedral contrasts remarkably with the narrow, close placing together of the supports in the Marburg Church. To the second epoch belong, among others, the nave and aisles of the cathedral at Meissen, the choir of St Stephen's at Vienna, the Church of St Lamberti, as well as that of Our Lady at Münster. These church arrangements, forming the minority in the present period, get so much the upper hand in the following, that they almost drive out the original.

These hall churches are a naturally intelligible and practical change, which the Gothic principle has experienced in Germany. For while this form hardly ever occurs in France or England, the majority of Gothic churches in Germany follow this arrangement. Although the hall church is more useful for the purposes of divine service, because it favours the piers being put wide apart, makes the altar and pulpit more easily to be seen, and is able in an equal space to contain possibly a larger number of people, still, in an artistic point of view, it is a weakening and a taming of the much membered and richly graduated Gothic system.

It may be here remarked that certain church arrangements were peculiar to certain orders. Even in the Romanesque times the Benedictines were distinguished for handsome towers and rich choirs, while the Cistercians preferred a small tower on the intersection of the cross, and the end of the choir rectangular; as in the cloister

churches at Riddagshausen, near Brunswick, Loccum, near Hanover, Marienfeld in Munster, and Maulbronn, in Swabia. In the Gothic times, it was the order of preachers and mendicants, the Dominicans and Franciscans, who liked large simple arrangements, often of great beauty in details, and contented themselves with a small ridge turret, without a transept.

The more severe forms of the first epoch, in the formation of the piers and windows, are found in the simpler arrangements of this time.

THIRD EPOCH.

(1375-1525.)

The style of this epoch can be called decorative, in order to express by it that architecture at this time begins, and continues even further to loosen the strictly legal expression of the inner life, and allows a more voluntary manner of treating the forms. By this was soon altered, not only the outer appearance, but also the intrinsic value of the work. The sense for finer form and more organic animation was now already lost, while single details were principally considered and partially developed into a superabundance of decoration, and thus coherence was lost, and the whole falls into greater and greater insipidity. There were certainly many gradations within this long epoch, as in some countries the decline was very gradual, in others more precipitous. Such a turning point occurs especially about 1450.

Often something great was undertaken and carried out, but in a more thoroughly insipid, and specifically vulgar sense.

The taste was now directed to the freer and wider spacing of the piers, by which were gained light spaces like halls, but the stirring, firm, changeful life of the members was lost. The piers have seldom the clear, legitimate form of earlier periods; but in their stead insipid round or polygonal piers, often with a concave contraction of the sides, come into general use. There are often found wonderfully complicated forms of piers. The socles shrivel up and vary in different forms. The *capitals are often completely omitted*, so that the vault ribs branch off immediately from the centre of the pier.

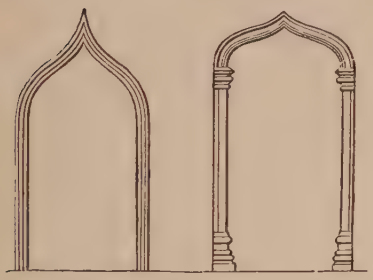
In the vaulting there now appears the *star* as well as the *net* form of vault, with its manifold interlacings. The severely organic connexion of the vaults and piers is already thereby lessened. The contours of the vault ribs lose the severity and elasticity of the earlier time, and experience a more arbitrary and more insipid treatment. Where tracery appears on the capitals or elsewhere, it appears mannered, partly too thin and pointed, partly too compact, bulging and bossy, serving more towards a brilliant effect, and to the polish of the chisel than to simple beauty.

The window tracery even does not remain free from the influences of an arbitrary taste for forms. Instead of the severely constructive forms, it passed now more

and more into such as were decorative and constrained, among which the so-called vesica (*fish bladder*), a figure in which the arbitrary bending and turning of the mullion work takes place, plays an important part. The effect of this window is often especially rich (as in Fig. 82 *a*); but often also inharmonious and insipid (as Fig. 82 *b*).

a Fig. 82.—Fish-bladder Windows. *b*

In later times the window tracery work becomes still more arbitrary. Constructions completely insipid gain the upper hand, and are connected with trifles, as, for example, the breaking off of the arms of the single foliations, the crossing of the tracery and such like. All the several members were thereby formed thinner, and lost the strong, elastic fulness of the best times.



a Fig. 83.—Ogee and Tudor Arch. *b*

An especially characteristic form is the ogee arch (Fig. 83 *a*)—an arch curved outwards, which is frequently seen in the tops of the windows and doorways; it is then often covered with bosses. The shorter *Tudor arch*, which originated in England (Fig. 83 *b*), sometimes occurs. The relations of the nave and aisles to one another were generally different, as free spaces, as high as possible, were mostly desired. In building the low side aisles, they were formed so slender, and so little elevation was given to the nave, that its windows were partly blind, and partly of an ugly dwarfed form. The effect of the whole was, however, to make them very light and analogous to the hall churches. The hall churches, as we remarked, became more and more general.

The richer arrangements of the choirs generally disappear and begin to form the exceptions. The most general termination is the simple one of three sides of an octagon. It rarely occurs that the side aisles are continued as corridors round the choir. Still rarer is the crown of chapels. On the other hand, the rows of chapels, formed by enclosing the buttresses against the aisles, are numerous. The transept also more and more rarely occurs.

On the stems of the smaller columns, and on the bases and socles of the piers all sorts of varied patterns, broken, crossed, or diamond-shaped interlacings are preferred. The shaft of the column is formed with spiral flutings, and even in the doorways the same right of

supreme arbitrariness is visible, at least in the mullions crossing and cutting through one another. The latest epochs of the Gothic even stray into a playful imitation of the trunk-work of trees with all its accidents. (Fig. 84.)

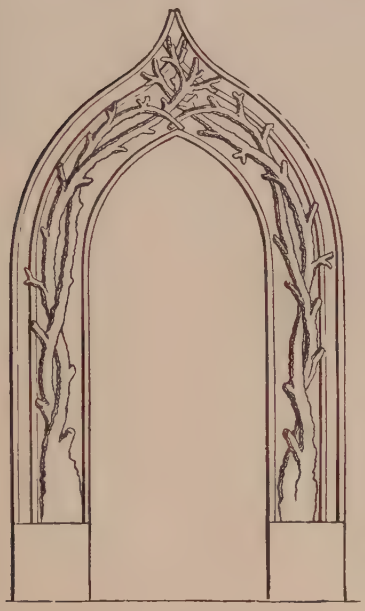


Fig. 84.—Late Gothic Branch Work.

The richest examples of the manifold decorative forms of the fifteenth century are seen especially in the *tabernacles* and *sacramentaries*, as well as in the *screens*, *pulpits*, and in other similar minor architectural works.

As examples of the numerous works of this late time, may be named the choir of the minster at Freiburg, the tower of the cathedral at Frankfurt-on-Maine, the minster at Ulm, the Teyn church at Prague, the cathedral at Erfurt, and the collegiate church at Xanten.

As hall arrangements of this epoch, may be noted the Church of Our Lady at Esslingen, the choirs of St Lorenz and St Sebald at Nuremberg, the Church of St Peter and St Paul at Gorlitz, and the Church-in-the-Fields (St Maria) at Soest.

Finally, there enter into the Gothic style many ideas

from the lately appearing "Renaissance" (that is, the return to antique forms), including the introduction of the round arch, and thus for a time there is a singular mixture, until at last Gothic art, both in its construction and in its ornamentation, completely dies away and is forgotten.

VI.

GERMAN BRICKBUILDING.

IN the North German Lowlands, that is, on the coasts of the North Sea and the Baltic, with the Lower Rhine, the Mark of Brandenburg, eastward far into Prussia, and southward into Silesia, the want of natural stone led early to the use of burnt tiles, or brick. As, however, most of these countries only became subject to Christianity in the course of the twelfth century, they adopted those forms of architecture which then reigned in the rest of Germany, that is, the late Romanesque, principally with a mixture of the elements of the transition epoch. For the general plan and arrangement of space, and for the development of the building, the restricted appointments and customs in the other countries continued in force, but in the treatment of the *details* the nature of the material rendered necessary many modifications. The most important among them are the following.

In the Romanesque time the use of brick caused the decay of the column Basilicas, so that one only occurs exceptionally, as in the cloister church at Jerichow. As a rule, the nature of the material suggesting it, the *pier* was adopted, which, however, was soon richly decorated

with half columns and other members, and soon led—as early as the eightieth year of the twelfth century, as in the cloister church at Arndsee (1184)—to the vaulting over of the whole church. The abacus of the pier remained much the same as that of the stone one, generally, however, with the greatest possible simplification of the members and of their arrangement.

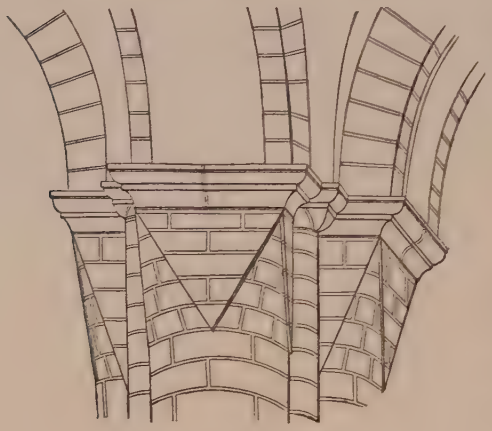


Fig. 85.—Capital from Ratzeburg.

The transformation of the *capitals* principally on the half columns was especially energetic. Here also the form of the cushion capital was relied on, but instead of the abacus being developed by segments of a ball from the round of the column shaft to the square capital, in brick-building this transition is accomplished by sections of a cone, so that the sides of the capital are not formed of semicircles, but either of *triangles* (Fig. 85) or of *trapezes* (Fig. 86).

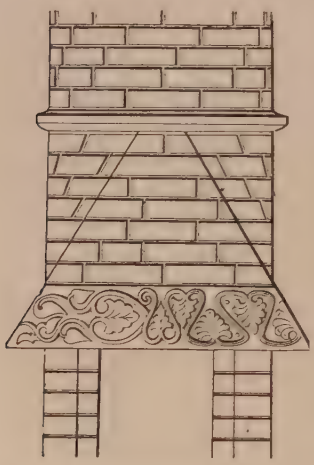


Fig. 86.—Capital from Jerichow.

The *ornamentation* of these

buildings is very slight, for, as a rule, the chief forms are often of unadorned simplicity. Sometimes, however, lime or sandstone is used for these more imposing parts, and then they are formed with those ornamentations peculiar to the Romanesque styles; or else they are burnt in clay, but then the relief thus made is very flat, and appears much more as if drawn than sculptured.

The membering of the wall space in the exterior by wall fasciæ and half columns, is the same in principle as in the examples of stone building given before. The arch friezes remain much in use, and are formed of different bands, simpler or richer, sometimes in connexion with a corbel cornice, sometimes with simpler cornices made of stones placed diagonally. By the side of the simple arch frieze appears very frequently one consisting of round arches crossing one another (Figs. 87 and 88); or one arranged as a diamond-shaped frieze, the feet of which rest on corbels (Fig. 88).

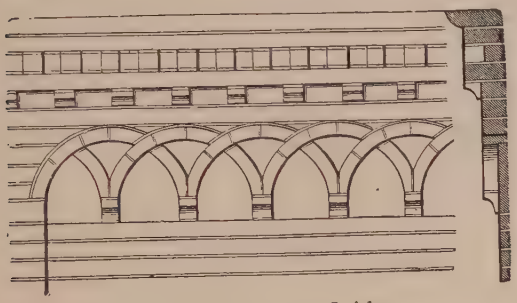


Fig. 87.—Arch Frieze from Jerichow.

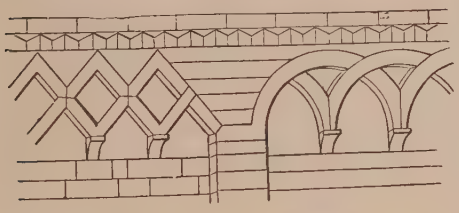


Fig. 88.—Frieze from Ratzeburg.

The whole building was in fact formed more *massive*,

and this is especially evident in the *towers*. The richer arrangements of towers are very rarely found here, and as a rule the building of towers is reduced to two connected together, or even one at the western façade. The membering of the flat spaces is effected by wall fasciæ, blind arches, and blocking courses. In this respect the exteriors, like the interior, was mostly left rough, without decoration or paint, although churches are to be found the interiors of which are adorned with distemper paintings.

The duration of the Romanesque style in the brick countries extends on account of its later development until the end of the thirteenth century.

We find a few Basilicas with flat ceilings, as the cloister churches at Jerichow, and those at Dobrilugk and Oliva, which at a later period were vaulted over. Vaulting soon comes in, and at first, though not for long, in the round-arched forms (as in the church at Arndsee), but almost immediately changes into the heavy pointed arches of the transition period, as in the cathedrals at Ratzeburg and Kammin, the cloister churches at Zinna, &c.

It was in the Gothic epoch that German brick-building attained its most splendid development. The plan of the churches in general follows also the system now dominant in the rest of Germany, either with the arrangement of low side aisles, and sometimes in a richly-developed building of the choir with its corridor and circle of chapels—and this is the prevailing one —or in the more simple forms of hall churches. How-

ever, even more than in the Romanesque period, brick architecture is distinguished at this time by a far more massive treatment of the whole. The piers are generally placed rather farther apart, but the windows are narrower than in Gothic stone-building, and thereby the wall spaces are also more extended. Thus these buildings had something heavy and severe, little in accordance with the Gothic art, which is often so airy and graceful. The formation of the *pier* especially differs considerably in the details. Only in the earlier periods were they made round, with or without responds. A square or octagon form was soon given them, either of the simple kind, or a more animated membering, by round fasciæ and responds, with a pear-shaped contour. (See Fig. 89.) The

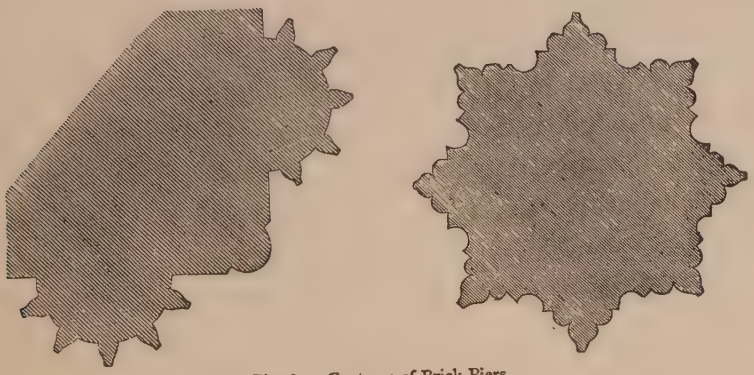


Fig. 89.—Contours of Brick Piers.

simpler insipid form appears again here in the later Gothic time. Their *socles* were made simple, and even the members of the capitals received a small measure of artistic treatment. The *capitals* themselves are generally unadorned; only in the earlier time of this style have

they an ornament of foliage, and are then often made of either stone or plaster. The separating arches had an elastic form of contour, but were a little stiff, as they were generally furnished with round fasciæ and hollow flutes, and in the later time even with simple scallopings.

The windows have, instead of an oblique scontion, a rectangular one, generally without any other contour, except that at the corners they are enclosed within and without by a round fasciæ. Their breadth was divided, according to the stone models, by mullions, which, however, show a plump heavy treatment, and develop into a tracery, starting out of a few slim forms, only in the early time of Gothic art. But generally, especially in the later times, tracery-work disappears altogether, and the mullions run up until they meet, most inartistically, the window arch.

The forms of the *star*, of the *net*, and of the *fan* soon appear on the vaults, which were mostly plastered, and sometimes even ornamented with paintings, so that, especially here, the style of building degenerating into the merely decorative, became rather common. The exterior is still more massively treated than the interior. The supporting system is simplified, and the binding arch, the crowns of the pinnacles, and all the ornamental forms in stone-building, are omitted. Very often even the spaces between the buttresses are brought into the interior of the building, and changed into chapels, by which the monotony of the unadorned weakly-membered mass of wall becomes still more striking. On the

other hand, in the later epochs a rich decorative quality was given to the flat spaces, while various kinds of friezes and ornaments in terra-cotta, glazed in different ways, were extravagantly spread out. Still this tapestry-like ornament has no deep connexion with the architecture, to which it seems simply attached. In its relation to painting, however, it has a really animating effect. The pointed arch frieze is still, at this period, a favourite termination to the walls. (Fig. 90.)

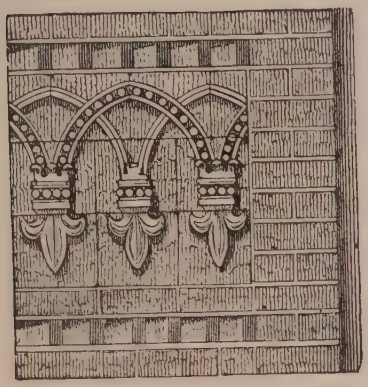


Fig. 90.—Frieze from the Church of the Dominicans at Cracow.

If brick architecture is necessarily moderate in the thickness of the contours of its original members, on account of its construction, yet, on the other hand, a rich change of forms is observable on the doorway, so much the more as the considerable thickness of the wall renders an enlivenment and membering of the deeply-receding wall doubly desirable. As the pliant nature of the material rendered possible a great richness of forms in the most varied combinations, a strict architectonic

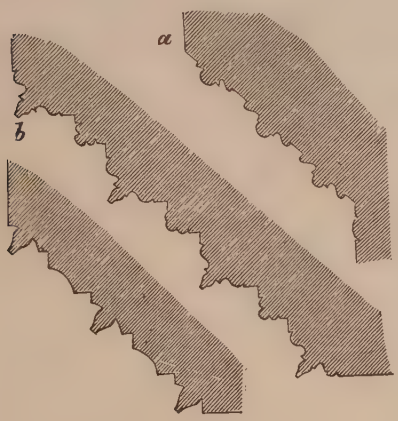


Fig. 91.—Contours of Doorways.

law was observed in a certain rythmic repetition of the principal design. At Fig. 91 we give three of such contours : *a* and *c* are the simple ones of St Mary's Church at Rostock ; *b* a very rich one of the Nicolai Church there.

In the later times brick architecture so far imitated the forms of stone-building, that ornamented gables of open trellis work were introduced,—as pointed gables on the façades, and especially over the doorways. The Church of St Catherine at Brandenburg (Fig. 92), is a splendid example of this style of building. This was freely introduced, in some measure to hide the high roofs. This last evil, among others, has been organically remedied in Prussia, by giving, as in the majority of the Danzig churches, a special roof to the nave, and to each side aisle, so that there are three saddle roofs parallel to one another. Thereby the façade is also divided into three, and even at the choir a similar sort of wall is formed at the rectangular termination, which is the favourite one in those districts. The most important brick churches of Germany are the following. With low side aisles and a rich choir :—the Marien church at Lubeck ; the Cistercian church at Doberan ; the cathedral at Schwerin (the massiveness of its walls and piers are plainly seen in the ground-plan, Fig. 93) ; the Mary's churches at Rostock and Wismar ; the Nicolai and Mary's churches at Stralsund ; the Cistercian churches at Chorin ; the cloister church at Berlin ; the cathedral at Havelberg ; the collegiate church at Cleve.

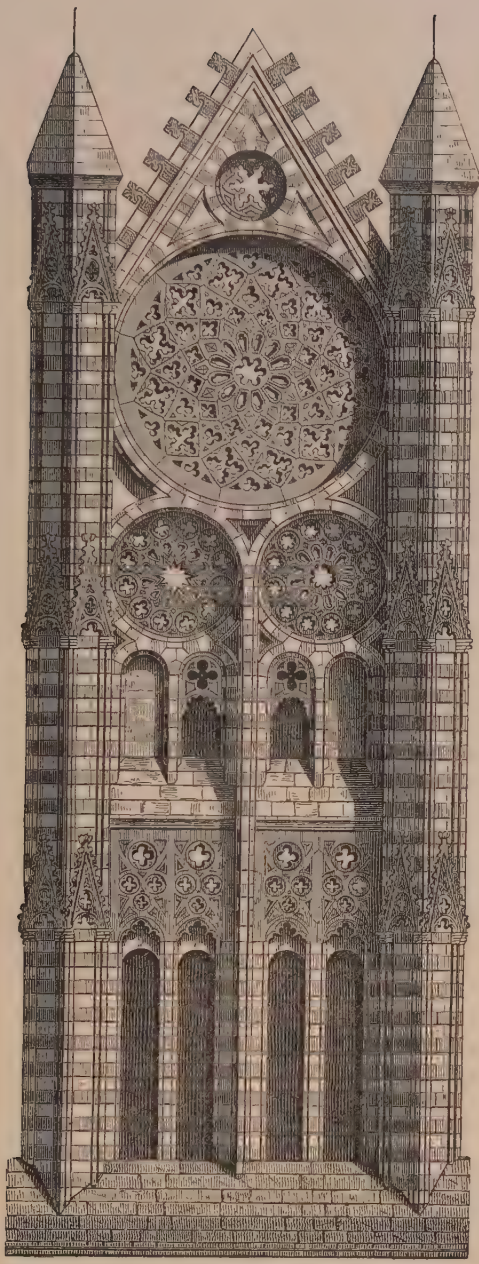


FIG. 92. Gable of the Church of St Catharine at Brandenburg. *See page* 100.

The most important of the hall churches are the Mary's churches at Prenzlau, Colberg, and Greifswald; the Catherine church at Brandenburg; the colossal

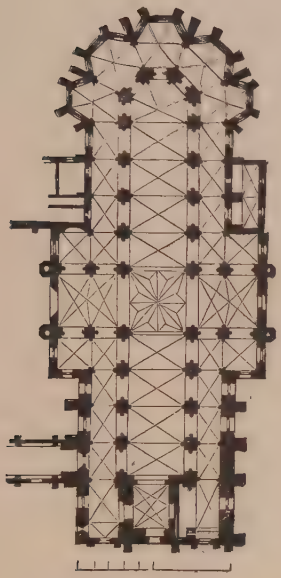


Fig. 93.—Cathedral at Schwerin (ground-plan).

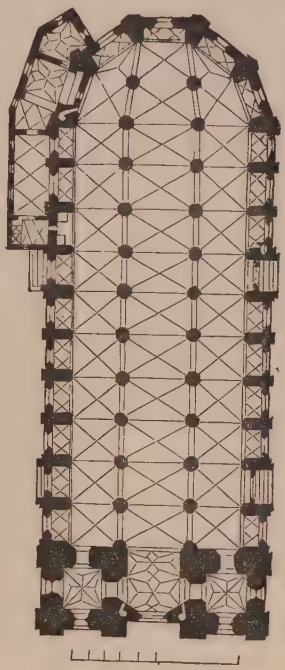


Fig. 94.—Church of the Madonna, at Munich (ground-plan).

Mary church at Danzig; the collegiate church at Calcar. Lastly, in South Germany, as special examples, are the Church of the Madonna at Munich (in its ground-plan, Fig. 94, the rich net vaults could not be shown); and St Martin at Landshut.

VII.

ARRANGEMENT OF THE MONASTERIES IN THE MIDDLE AGES.

MONASTIC life, which had arisen in the East, that is, in Upper Egypt, as early as the fourth century, with St Antony, was regularly constituted and greatly improved in the West by St Benedict of Nursia in the sixth century. The monastery founded by him at Monte Casino, near Naples, in the year 529, was the parent institution of the order of the *Benedictines*, which, in the following years, became so powerful and extended so far. The arrangement of all these monasteries shows a thorough uniformity in their important features. On all sides of a rectangular court, which, as a rule, is square, surrounded by arcades (the cloisters *ambitus*), are grouped the church, and the places appointed for the residence of the monks, which are comprised under the name of the *clausures*.* It is the plan of the ancient *villa urbana*, which seems to have served as a pattern to the Benedictines. In the same way the out-houses exterior to

* This word is now obsolete, but it possibly has its counterpart in the *close* in the neighbourhood of cathedrals.—T.

the *clausures*, which are attached to them, follow the plan of the *villa rustica* among the Romans. Of the plan of a Benedictine abbey of the ninth century, the Abbey of St Gallen, designed about 820, is an excellent example. The whole plan includes a space of from 300 to 430 feet square. The central point is the church, on the south side of which is the cloister, with the buildings belonging to the *clausure;* and to the east of the cloister, contiguous to it, is the dwelling-house of the monks, with the general dormitory, the bath and wash-house; to the south the *refectorium* (the dining-hall), with the church; and to the west the cellarage. The wing of the cloister next to the church serves as the *chapter-house.* Near the eastern choir of the church is, on the north side, the writing-room, with the library above, and on the south side the justice-chamber. On the east side of the church lie, separated by two chapels, the infirmary and the school for the novices, each with its small cloister in the centre. To the north side of the infirmary stands the dwelling of the physician, with a special house for bleeding and purging. The dwelling of the abbot, the school-house, and the lodgings for illustrious strangers, with an out-house, are to be found on the north side of the church; corresponding to this last on the south-western side are the lodgings for pilgrims and the poor. Attached to these important parts thus spread out are, on the western and southern sides, the house for the servants, and the stalls for sheep, pigs, goats, cows, oxen, and horses, besides the workhouse,

the malt-kiln, the brewery, and the bakehouse attached to the kitchen of the monastery, the stamping-mill and the corn-mill, the house of the various labourers, and the great barn. Lastly, at the south-eastern corner, are the round out-houses for the chickens and geese, the garden, and the burial-place. This complete arrangement is of so much the greater importance, as the monasteries of the Benedictines, in the magnificence of the seventeenth and eighteenth centuries, have nearly everywhere destroyed their old arrangements in their new buildings. The best example existing of this kind of arrangements is the Abbey of Comburg, near Hall, in Swabia, whose scattered buildings, including even the fortified outer walls, are in a great measure still standing. A gate with two towers defends the entrance, over which is a chapel dedicated to St Michael, the champion and patron.

We meet with similar arrangements in the collegiate institutions which followed the rule of St Augustine, as well as in the cathedral chapter-houses in connexion with bishops' churches, whose central point was the episcopal palace placed by the side of the cathedral. As these bishops' seats, surrounded by walls and ditches, formed as it were a town in themselves, we still recognise them in many places, as, for example, in the cathedral at Munster, and the abbey at Herford. As in the course of the twelfth century the capitularies gave up the common cloister life, their special dwellings (*curiæ canonicales*) were erected near the cathedral.

Next to the Benedictines, the Cistercians, an order

proceeding on the same discipline, have a great significance for the history of mediæval ecclesiastical architecture. The strictness of this order immediately brought with it a simplifying of church building. While generally the apse was omitted, and the choir terminated as a rectangle, minor chapels, as a rule, were attached to both sides of the transept. We see this in the cloister churches of Marienthal and Loccum in Lower Saxony, at Bebenhausen and Maulbronn in Wurtemburg, at Eberbach on the Rhine, and at Kappel and Wettingen in Switzerland. Sometimes a corridor is formed against the rectangular choir, as at Marienfield in Westphalia; often there is a rich chapel system, as at Ebrach in Franconia, and at Riddagshausen in Brunswick. The church at Heisterbach, still existing, but in ruins, shows the semicircular termination with corridor and crown of chapels. Besides, the Cistercian Order forbade the introduction of bell-towers, and instead of these, even in the largest churches, they contented themselves with a small roof-turret in the middle of the transept. The towers of the church at Olivia, near Danzig, form an exception. Lastly, an extraordinary length of nave is common in Cistercian churches, the reason of which is so much the more difficult to explain, as the cloister churches were little attended by the laity, and their use completely forbidden to women.

The cloister arrangements of the Cistercians are in other things similar to those of the Benedictines. The cloister is here, as there, generally on the southern side,

and seldom on the northern side of the church. With the Cistercians there was generally, on the side of the cloister lying opposite the church, a polygonal or round well-house, in which the beard and hair of the crown of the head (the *tonsure*) was shaven off. The chapter-hall for the meetings of the convent is generally on the east side of the cloister, and is sometimes provided with an altar apse. Important monasterial arrangements of

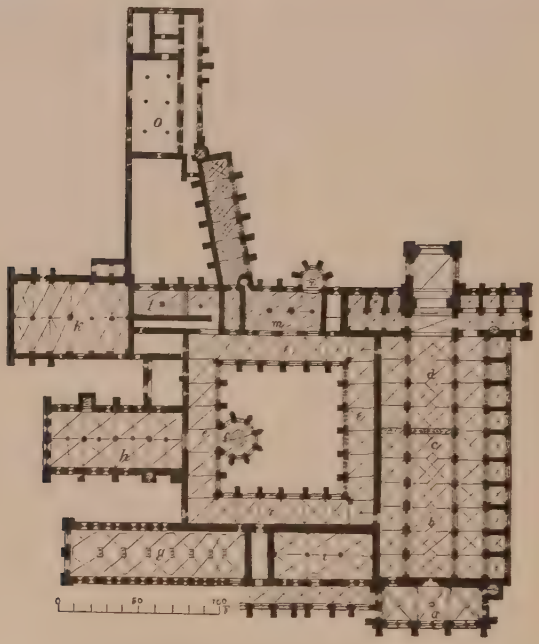


Fig. 95.—Monastery at Maulbronn (ground-plan).

the Cistercians are still to be found at Ebrach, at Altenberg near Cologne, at Riddagshausen and Maulbronn in Wurtemberg. In the last place, even the fortified walls, with their towers, as well as the other details of mediæval arrangements, are all preserved. (Fig. 95.)

From the large entrance-hall, *a*, we enter the church, the nave of which, *b*, is separated from the presbyterium, *d*, by the screen, *c*. On the north side of the church lie the cloisters, *e*, with the well-house, *f*, the refectory, *h*, and the chapter-hall, *m*, with its altar apse, *n*. From this a corridor leads us to the house of the abbot, *o*. The space, *l*, at the north-eastern corner of the cloisters, seems to contain the discipline-chamber, to which adjoin the vaulted cellar spaces, *k*. On the west side of the cloister is another vaulted cellar, *i*, and an older refectory, *g*, which, used alternately with the above-mentioned space, *h*, may have served as the winter refectory; for we find in many monasteries, as for example at Bebenhausen, special refectories for winter and summer.

The monasteries of the Præmonstratenses have much resemblance in arrangement and execution to those of the Cistercians. The monasteries of the Madonna at Magdeburg and the Abbey Cappenberg in Westphalia, are examples of this kind, whose unassuming simplicity rivals the simplest arrangements of the Cistercians.

If the Benedictines preferred to build in an open position at the back of a woody chain of mountains, and if the Cistercians sought separation from the world in the quiet woody glens, the Orders of Preachers and Mendicants, arising since the thirteenth century, of the Dominicans and Franciscans, or of the minor orders, established themselves in the populous towns. For if the generality of the superior orders lived apart, with the view of devoting themselves to learned studies or

artistic work, the popular orders undertook to work on the masses as curers of the soul by preaching and confession. They sought for a modest place in the towns, close to the walls or elsewhere, where they erected their monasterial arrangements, in fact, conformable to those of the older orders of monks. Still, there prevails a more frugal execution, which limits itself to what is absolutely necessary, and is shown, even in the churches, by the avoidance of a tower, instead of which appears a roof-turret, and especially by the omission of the transept. In some places, as in the Dominican churches at Schlettstadt, Colmar, and Gebweiler, there rises a slim tower on one side of the choir, instead of on the roof. Comprehensive monasterial arrangements of this kind are preserved in the Minorite church at Danzig and in St Katherine's at Lübeck.

Really differing from all these monasterial arrangements are the great establishments of the Carthusians, who arose about the fourteenth century in Germany. Their monasteries are distinguished by this: that they possess, by the side of the church, and of the cloister in connexion with it, a second far larger cloister, generally on the east side of the church, which includes the burial-ground, and is surrounded by the single dwellings of the monks, which are separated from it by small gardens. A well-house is sometimes joined to the cloisters, as among the Cistercians; as that adorned with the handsome Moses' Well in the Carthusian monastery at Dijon. The Carthusian monastery now used by the Germanic

Museum at Nuremberg is the completest arrangement of the kind in Germany. Another is found at Paradies near Danzig.

A blending of monastic life with chivalry was aimed at by the orders of spiritual knights, among whom the *Knights of the Teutonic Order* have an especial prominence. The living in common, essential to monastic life, is observable in the numerous castles of the German order, as well as the warlike pride of chivalry, and the splendour of princely dominion. The castle is formed of a square court in two stories, with arcades, surrounded by a rectangular building crowned with battlements, which is flanked by towers, and surrounded by a wall and ditch. This is shown in the principal castle of Marienburg, marked as A in our view (Fig. 96). On the eastern side arises a vaulted chapel, above which is the church belonging to it, which, with the chapter-house, occupies the north wing of the castle. The middle castle, terminating the southern end of the west wing, which juts out, contains the dwelling of the grand-master, with the handsome refectory in the corner. To this, towards the north, is attached the refectory of the order, separated by three columns, with the dwellings of the knights. The lower castle, with its domestic arrangements and stalls, omitted in our drawing, forms a third group.

From the infirmaries, which were originally connected with the monasteries, were originated special hospitals even in the course of the twelfth century; and the Brothers of the Holy Spirit, founded in 1198 by Innocent III.,

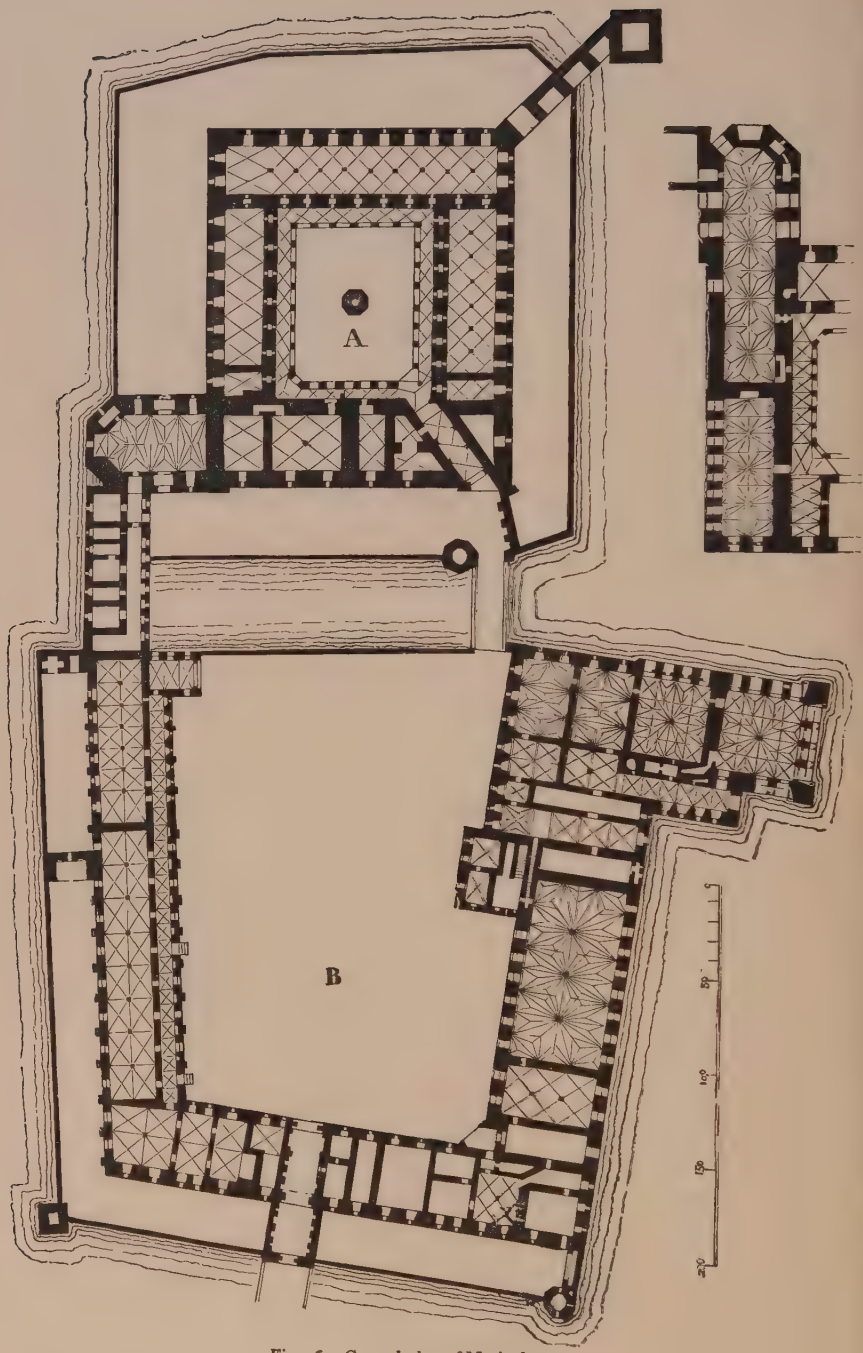


Fig. 96.—Ground plan of Marienburg.

soon established everywhere in Germany similar establishments for the care of the sick. They were, as a rule, at the entrance of the towns, but always by the side of a river or a brook. In the hospital still preserved at Lübeck (Fig. 97) stands the sick-room, which is about 280 feet long, with beds on each side towards the street, having a short hall-church of nave and two aisles in connexion with it, the nave of which has its continuation in it. The altar of the church is in the middle of the separating wall, covered by a structure resembling a screen resting on six columns. On both sides of it are entrances to the sick-room, an arrangement which is imitated, in its principal features, by the building of the screens of churches, with the altar for the laity, and the two doors leading to the choir.* A small court, with a cloister, and the neighbouring dwellings and sick-rooms, is attached to the chief plan at the north; to the south adjoin the archives, with the master's room, and a court with the

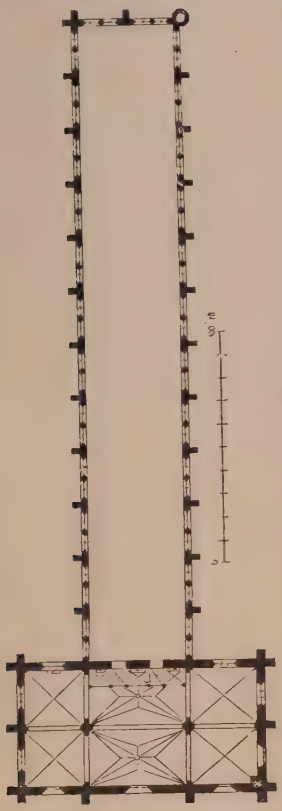


Fig. 97.—Hospital at Lübeck.

* The illustration in Otte's "Handbook," taken from Verdier and Cattois, is not sufficient; ours is founded partly on our own survey, and partly from a plan kindly sent us by Herr Milde in Lübeck.

smaller dwelling-rooms. On the other hand, the Nicolas Hospital at Cues, on the Moselle, founded in 1450 by Cardinal Nicolas of Cusa, has a more monastic kind of arrangement. A cloister forms the central point, to which adjoin three halls, vaulted on pillars, and the cells of the hospitallers. The magnificent hospital at Beaune, in Burgundy, founded in 1443, and similar in plan to that of Cues, but surrounded with arcades only on two sides of the court, is also well preserved.

SECOND PART.

CHURCH FURNITURE.

I.

THE ALTAR.

WHEN a sacrifice is to be offered up, the first necessity of worship is the altar. The bloodless sacrifice of the mass in Christianity, even in the earliest times, called forth the new doctrine of the altar. At first it was, as it appears, of wood, and had its name, "*mensa domini*" (*the Lord's table*), in remembrance of the supper-table on which Christ had placed the sacrifice of the Eucharist. In the chief altar of the Lateran Church at Rome, such an altar is still shown enclosed, on which St Peter is said to have offered the sacrifice of the mass. It is distinguished from all the other altars of Roman Catholic Christianity by the peculiarity that it alone conceals no relics. The altars were generally placed over the graves of the martyrs, and thence originated the law that no altar was to be erected without being consecrated by such holy relics. Where no grave of a saint was to be had, relics were enclosed in the altar, while a small rectangular excavation, closed with a stone, was made, as a small sepulchre for the reception of the relics in the upper altar slab.

We meet with the oldest and simplest form of altars in the Roman *Catacombs*. They are the graves of the martyrs vaulted over with a triumphal arch (*arcosolia*), above which, on the days of remembrance, the celebration of the love-feast was held. Traces of portable altars have been found there. However this may be, at least the oldest form of the Christian altar is that of a long rectangular sarcophagus, which is covered over by a slightly projecting slab. The altar-table, the *mensa*, is principally of that shape through all the middle ages down to our own time.

With regard to the material, wood seems to have been used in the early times by the side of stones of various kinds. But this latter soon supplanted the former, and came into general acceptation. Since the fifth century we find the precious metals used; either the altars were massive, as the golden one adorned with precious stones of St Sophia's at Constantinople, and the one in the mortuary church founded by St Helena at Jerusalem; or else, in renewal of the primitive style of workmanship to which the Greeks had been accustomed in their gold and ivory pictures, there came into use the laying of silver and gold plates on a wooden or stone body.

Other altars consist simply of three stone slabs, of which two, placed upright, serve as a support to the third, which is horizontal. Of such a kind is the chief altar of St Vitale at Ravenna in the sixth century. So also is the Romanesque altar in the cloister church at

Petershausen near Constanz. Others, again, have their upper slab resting on columns, generally on five, one in the middle and four in the corners. In Germany there are still single examples of this kind of the Romanesque time; like the stone one resting on four short columns with cushion capitals and a middle pier, in the All Saints' Chapel in the cathedral at Ratisbon, belonging to the earliest Romanesque epoch (Fig. 98). There are similar ones in the crypt of St Gereon at Cologne, and in that of the cathedral at Gurk. One of the most

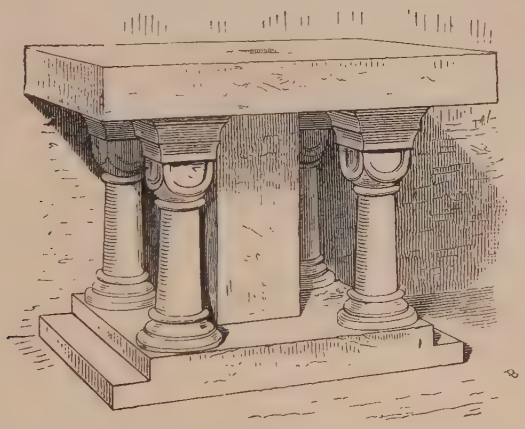


Fig. 98.—Altar at Ratisbon.

beautiful is that founded by Henry the Lion, in the cathedral at Brunswick, in the year 1188, a slab of marble resting on five bronze columns. In other cases we often meet with smaller altars, where the table is supported by a single column. It is so in the crypts of St Cecilia at Rome, and in an altar of the early Christian time, discovered at Auriol in Southern France.

If the altars were hollow, and were destined to receive relics in their interior, and not only in the slab, the walls were broken by openings, so that the faithful could look in. Of this kind is the very ancient altar in the Stephen's chapel of the so-called "old cathedral" in the transept of the cathedral at Ratisbon. Similar, also, is the original "Krodo-altar" of the cathedral at Goslar, which was saved after the destruction of the building, in the entrance-hall, which alone remained. It is a structure consisting of pierced bronze slabs, resting on four kneeling figures of men, and supporting a marble slab.

The great majority of the Romanesque altars still preserved in Germany show a massive rectangular base built up of stones, and closed above by a projecting slab, which is connected to the lower part by a slanting bevel. As a rule, the flat parts are without ornament, because they were generally covered with magnificent stuffs. Still, there were also examples of ornamented altars, as the three altars erected in the early part of the eleventh century in the lower chapel in the collegiate church of St Peter and St Paul at Neuweiler in Alsace, where the front sides are covered with fillets and plaster-work of a severe style; or the altars ornamented with blind arcades in the Michael's chapel of the Roman Catholic church at Heilbronn, and in St Gervais at Maestricht. (Fig. 99.)

Even in the earliest Christian times we find several altars in one and the same church. Not only do the

Catacombs in their single chapels often show several *arcosolia*, but the Basilicas also seem at a very early period to have had at least three altars, as is evident, for example, from the Church of the Holy Sepulchre in Jerusalem. In the ancient Lateran church at Rome

Fig. 99.—Altar at St Gervais at Maestricht.

there were erected seven altars, even as far back as the fourth century, and the building plan of St Gallen, belonging to the ninth century, assigns to the church as many as seventeen altars. In consequence of the religious endowments, in which, during the Middle Ages, private persons and whole corporations rivalled one another, it came to pass that, towards the end of this epoch, not only cathedrals, like the cathedral at Magdeburg, but even the town parish churches, such as St Mary's at

Danzig, and St Elizabeth's at Breslau, possess about fifty altars. Among all these altars the high altar stands predominant in importance as well as in size. In the early Christian times it was erected *before* the apse, while the seats of the bishop and priests were placed against the walls of this apse. On that account it was necessary that the high altar should be isolated, because in the first centuries the celebrant stood *behind* the altar-table, facing the congregation. It was only in later times that an alteration took place, which has since been continued in the Roman Catholic Church, viz., that the priests took their general position *before* the altar, with their back turned to the congregation; thus the altar could be placed further back into the apse, as at the same time the seats of the clergy were placed at the two side walls of the lengthened choir. But the high altar was always raised three steps above the ground of the choir, in order that the priest should ascend the first and last step with his right foot. For the same reason, the side altars were raised one step. Their place was in the apses of the side aisles or of the transept, against the pier walls of the nave, in the side chapels, and against the walls of the side aisles. Each altar had to be consecrated by receiving enclosed relics, however small the particles might be; besides this, each had to be dedicated to one or several saints. The north side of the altar is called the Gospel side, the south the Epistle side, because at the former the Gospel, at the latter the Epistles were read. Among the side altars, the one on the west

side of the choir-screen (thus erected under the principal arch between the presbyterium and the nave) takes a prominent position. It is, as it seems, always dedicated to the Holy Cross, and serves as an altar for the laity for the divine service of the congregation of the laity in bishops' and cloister churches. It was customary to place above it, on a cross beam, a large crucifix, carved in wood and painted, with the figures of the Virgin and St John beside it. All the colossal wooden crucifixes which we often meet with in the side spaces of ancient churches, had originally this important place. We find one of the most important and beautiful groups of this kind enriched even with the repentant Magdalene, above the triumphal arch of the Clara church at Nuremberg. The colossal crucifix in the cathedral of Soest is remarkable for great antiquity. At the four ends (as often happens) are the symbols of the Evangelists, and on the back, turned towards the choir, there is shown in painting all which on the front stands in relief. Some keep their old places, as among others the crucifixes of the Reinold and the Mary churches at Dortmund, and of the Catherine church at Osnabruck. In general, we find them here more numerously in the churches which have become Protestant than in those which have remained Roman Catholic.

The *covering of the altar-tables*, even in the early times, became one of the favourite undertakings of Christian art, as the side spaces of the table, which as a rule were quite bare, had a special decoration. As early

as the fifth century, altar coverings of gold occur, ornamented with precious stones, called "*antependia.*" The oldest preserved example is the antependium of the high altar of St Ambrogio at Milan, made in the first half of the ninth century by Master Volwinus. It covers all the four sides of the altar, and contains rich designs, executed in relief, from the life of Christ, twenty-four in number. On the front side, in the centre space, is the Redeemer enthroned, surrounded by the Apostles and the emblems of the Evangelists, in rich borders adorned with filigree and precious stones. The

Fig. 109.—Altar-table at Bâsle.

expensiveness of the material has brought destruction on the majority of these works. The handsomest of the German examples which have come down to us is the

golden altar-table which the Emperor Henry II. presented to the minster at Bâsle, lately bought at a ridiculously low price for the collection of the Musée de Cluny at Paris. (Fig. 100.) In the elegant column arcades, surrounded by foliage and friezes with animals, are shown, in strictly Byzantine style, the standing figures of Christ, the Archangel Gabriel, Raphael, Michael, and St Benedict. The Abbey Church of Comburg near Hall, in Swabia, possesses another handsome work of this kind of the twelfth century. Here, also, Christ is the centre, on both sides the twelve Apostles, all strictly Byzantine, with borders and panels of enamel work in the most beautiful patterns. A late Romanesque antependium, consisting of a gold and enamelled copper slab, is now in the Town-hall chapel at Cologne. It originally belonged to the Church of St Ursula.

Such *chefs d'œuvre* were always rare, and were only exposed to view on high festivals. By far the majority of these altar antependia consisted, on the other hand, of common materials,—of painted wooden panels, of frames with embroidery, or even loosely-hanging embroidered coverings. A painted wooden panel of this kind, from the Walpurgis church at Soest, is to be seen in the Museum at Münster. It consists of painted column arcades on a gold ground,—John the Baptist and St Augustin, St Helena and St Walpurgis, and in the centre Christ enthroned, all in the Romanesque style of the thirteenth century. We find embroidered antependia on the high altar of the Meadow Church at Soest,

in the Lambert church at Münster, and in the treasury of the cathedral at Salzburg, the last especially rich and beautifully membered, all are of the fourteenth century.

With such furnishing of the altar-table, the building of the altar was, in the early times, complete. The fine clothes over the slab, which were quite indispensable, were covered with white linen, and on it were placed, in the middle, a crucifix, near to it the mass-book, and on each side a candlestick, and the equipment of the altar was then complete. But for its protection there soon arose over the high altar a baldachin, resting on four columns, the so-called *ciborium*, from the centre of which hung the vessel with the consecrated bread, often in the form of a dove. On the sides were introduced movable curtains on poles, which were used by the celebrant in the chief moments of the offering of the mass to preserve from profane gaze the treatment of the sacred elements. The ancient St Peter's Church in Rome possessed, in the ninth century, over its high altar, a great silver ciborium. The ciboriums still preserved in Romanesque Basilicas, as in St Clement, are erected of marble. Altars with ciboriums occur only exceptionally in the Middle Ages in Germany, and their baldachins have more the character of special chapels. The southern transept of the cloister church at Hamersleben has such an one of the later Romanesque time. The most beautiful altar with a ciborium of the early Gothic time in Germany, is the one in the transept of the Church of Our Lady at Halberstadt. Others of the Gothic time

we see in the cathedral at Ratisbon (Fig. 101), in St Stephen's at Vienna (above the Leopold altar), in the

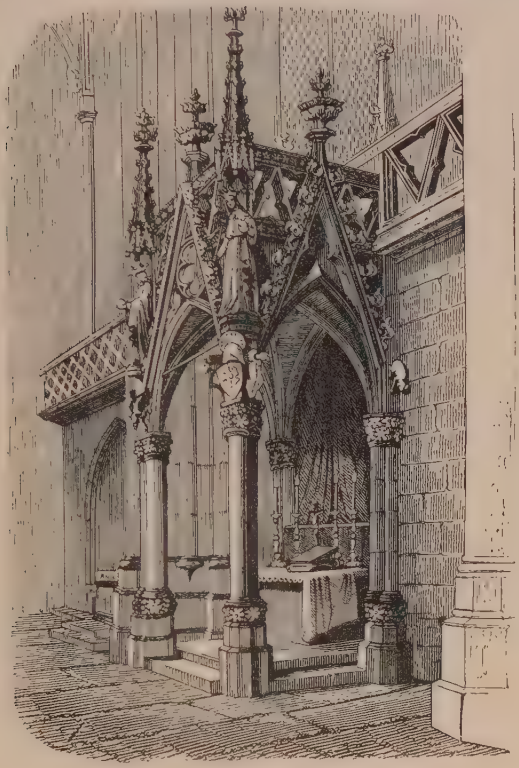


Fig. 101.—Altar of the Cathedral at Ratisbon.

cloister church at Maulbronn, in St Elizabeth at Marburg, and in other places.

In opposition to this form, which is tolerably rare in Germany, another form came into use from the beginning of the Romanesque epoch, and gained general predominance; it is known as the wall-altar or the altar of relics. About this time on account of the

increased honour paid to the saints, the custom extended of placing the relics in artistic receptacles on the altars. For this purpose a higher, towering stone wall (*retabulum*) above the altar-table was erected as a back wall and termination to it, the baldachin being set aside, and on this the receptacle for the relics was placed. Hand in hand with this alteration, a still more important liturgical change was rendered necessary; the celebrant took his place no more behind, but before, the altar-table, also turning his back to the congregation, and only turning to them at the words, "*dominus vobiscum*," "*ite missa est*," and other addresses. This has been the most important epoch in the history of Middle Age altar-building, for from this time begins its peculiar development in the whole north of Europe, and especially in Germany.

In the Romanesque epochs this back-wall of the altar (the *superfrontale*) received either stone-reliefs, as in the late Romanesque altar in St Gervais at Maestricht, or a metal covering with embossed designs and enamel-work, similar to the antependia. The oldest example of this is the Pala d'Oro on the high altar of St Mark's Church at Venice, constructed A.D. 967 at Constantinople, renewed 1105, and since often restored. It is adorned with representations out of the Old and New Testament and with figures of saints. One of the noblest works of this kind is the altar-panel in the Church at Klosterneuburg, which is, perhaps, the most beautiful enamel-work of the Middle Ages. Completed in 1181 by Master Nicholaus von Verdun, it contains a complete series of

typological pictures, in parallel representations, of the Old and New Testament. A beautiful example of such altars is that which was formerly placed in the Abbey Church of St Denis at the intersection of the transept and nave. It is known to us by an old description, and by a painting of Van Eyck (Fig. 102). The

Fig. 102.—Altar from St Denis

back wall was adorned with a golden panel, which contained forms peculiar to primitive times, perhaps even to

the eleventh century—Christ enthroned and surrounded by the symbols of the evangelists and several saints. In the thirteenth century, columns, with angels holding candlesticks, were introduced on both sides; over the centre of the panel was put up a large golden cross, and at the back of the altar there was introduced a shrine for relics under a baldachin supported by columns. Besides this, the altar was enclosed on both sides by movable curtains, an arrangement very prevalent in the Middle Ages, and in which there seems, probably, a reminiscence of the curtains of the earlier ciborium altars.

This connexion of the reliquaries with the altars led to many variations in the arrangement and construction of the latter. The baldachin of the previous ciborium altars was again frequently introduced, in order to rise now behind the altar as a protection to the reliquary. In Germany this is shown in a beautiful manner in the altar of St Elizabeth's Church at Marburg, crowned with three baldachins, at the back of which the reliquary suspended is supported on one side by a column, on the other by the back wall of the altar. Another example of this kind, especially worth seeing and instructive, is the altar of the Mary chapel in the Church of St Denis. (Fig. 103.) Executed in the noble forms of the early Gothic style, it is crowned over the retabulum by a baldachin, under which is placed a shrine with the relics of St Hilarius and St Patroclus. In Germany, such stone altar-baldachins are only to be found exceptionally; a few very elegant examples are to be found in West-

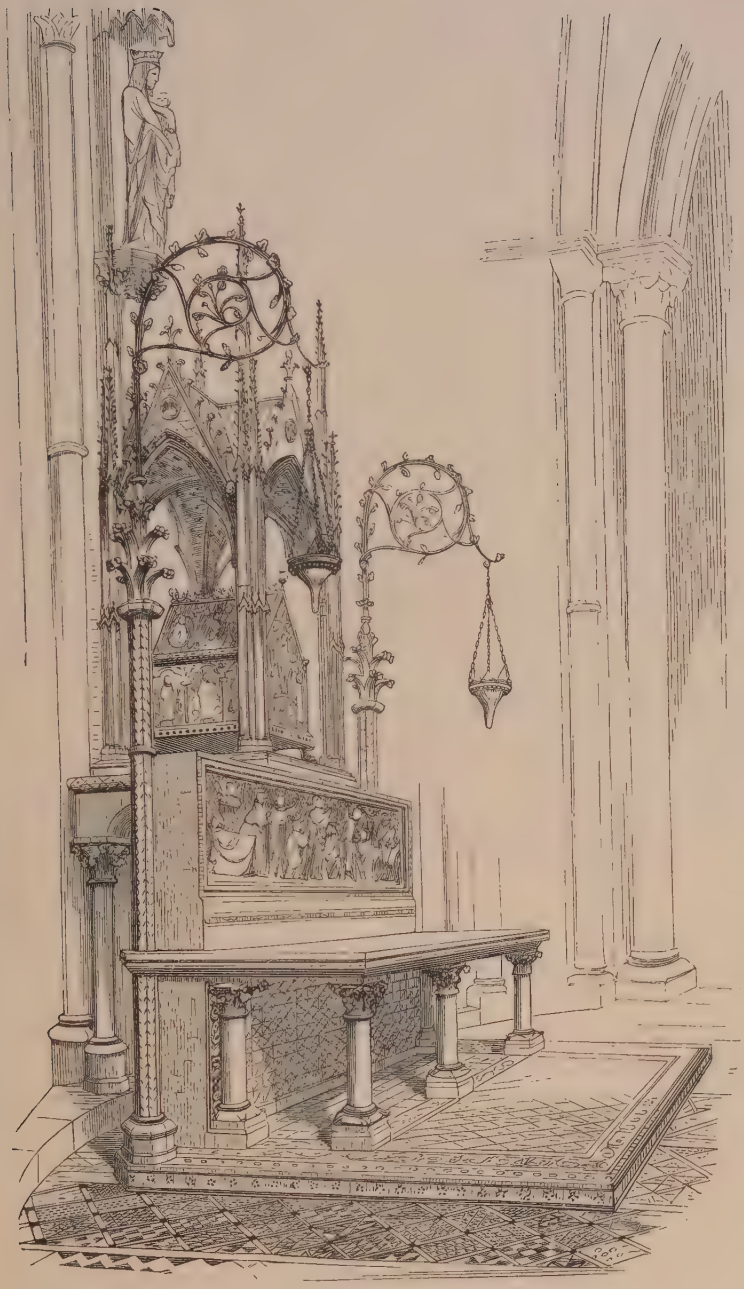


FIG. 103. Altar from the Chapel of Mary in the Church at St Denis. *See page* 128.

phalian churches. One of these is the former high altar in the cathedral at Paderborn, now placed in the northern area of the transept, rising up into a single pyramid, and adorned in the middle with a statue of the Madonna beneath a baldachin; the whole a noble work of the fourteenth century. There are others, like the altar in the Elizabeth-church at Marburg, crowned with three pyramids,—with this difference, however, that the middle one rises considerably above the side ones. In this style are the very elegant high altar of the collegiate church of St Mary-on-the-Hill at Herford, and an altar of the Meadow Church at Soest, both belonging to the fourteenth century. The altar in the parish church at Unna shows similar arrangements, but later forms; in its upper space sits Christ, showing His wounds, and surrounded by angels with music.

In the Romanesque times, the decoration of the altars devolved on skilful goldsmiths. In the transition and early Gothic epoch, stone-carving, even in the building of altars, had the predominance, but in Germany this predominance was of short duration, for we see that the altar-building was soon almost exclusively given up to the wood-carvers and painters. At the same time a new phase in the development of altar-building took place, while the exhibition of relics on the altars became more and more of secondary importance. Where in single cases relic-altars were still built, they have the form of high wooden boxes, which can be shut, and which as a rule are crowned by airy pyramidal baldachins.

The high altar of the cloister church at Doberan is an example of this, with six shrines closable behind, finished above by pointed gables and finials, and ornamented with sculptures illustrating the life of the Virgin. Another beautiful altar, the reliquary of which is surmounted by a gilt iron railing, is to be found in the church of St John at Essen. A similar arrangement is even yet to be seen in the high altar of the cathedral at Münster, and in that of the church of St Ursula at Cologne. In other cases the relics are placed on the altar panel, which now, as an altar-step or *predella*, forms the basis of the upper structure which rises above it. Examples of this kind are seen in the cloister church at Blaubeuren, in St Lorenz at Nuremberg, and in other places.

By far the greater number of these altars of carved woodwork renounce altogether the exposure of relics, and, instead, exhibit rich carved ornamentation on the predella, and on the large and rather deep centre shrine. On the predella are generally portraits of the Apostles and of other saints, and even the body of Christ; on the principal shrine, life-size statues of Christ, of the Madonna, or of the patron saint; also, in a number of smaller panels, representations in relief of sacred histories, in the manner of painting, in animated and pathetic groups, with landscape backgrounds. These shrines were, however, only opened on high festival days. On common days they were generally shut in by large folding-doors, which are covered inside and out with paintings, gene-

rally on a gold background. When the doors were

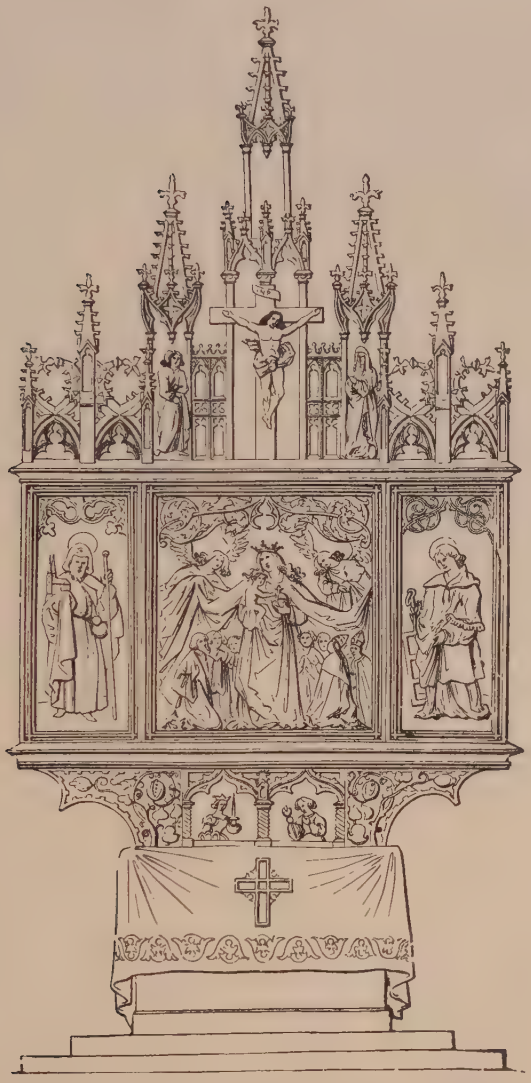


Fig. 104.—Altar from the Church of the Augustines at Nuremberg.

opened, the richness of the inner sides, which were

covered with paintings or low reliefs, as well as the full beauty of the centre shrine, with its statues or high reliefs, made the splendours of the gold and the polychromatic decoration still more brilliantly prominent. Also, not contented with this, to many altars were given double folding-doors, one over the other, so that the various divine festivals could be distinguished by a still richer altar scenery. At last the altar shrine often received a crown of pyramids and finials, which, as a rule, rise as three airy baldachins decorated with statuary. Such altars are called, according to the numbers of their wings, *diptychs* (of two divisions), *triptychs* (of three divisions), *tetraptychs* (divided into four), *pentaptychs* (divided into five), &c.

It is not known when these carved altars first came into use. The earliest of those existing seem to belong to the fourteenth century; but early in the fifteenth century they became general, and are everywhere in Germany in such favour, that even now we meet in many churches with a dozen or more, and the total number in Germany can be reckoned by hundreds. The preference for this form of altar remains until about the middle of the sixteenth century, so that a great variety may be observed as different kinds of art: such as open carved work, sculpture in relief, and painting were employed. The pictorial contents of these great altar-works include the whole cycle of Christian representations. The high altar is, on account of the increasing Mariolatry of this time, nearly always dedicated

to the Madonna, and without exception in all the Cistercian churches, which themselves are dedicated to the Holy Virgin. Thus the high altar of the church at Doberan portrays, on the Gospel side, the seven joys, on the Epistle side, the seven sorrows of Mary; in the centre row, corresponding scenes of the Old Testament. Thus, John with the lamb, and Eve with the snake; the appearance of Christ as a child in the manger, and the appearance of God in the burning bush; the scourging of Christ, and Moses striking the rock for water; Christ bearing his cross, and Isaac carrying the bundle of wood. In the centre of the altar we see the coronation of Mary. The altar of the laity, which was dedicated to the Holy Cross, and, as already remarked, placed in the middle of the transept, was, as a rule, covered with representations of the sufferings of Christ. This is shown in the altar in the same church. The remaining side altars were, as a rule, ornamented with statues and legends of the saints to whom they were dedicated.

On account of the great number of such carved works, we can here name only a few of the most important. One of the most magnificent is the high altar (already mentioned) of the monastery church at Blaubeuren (A.D. 1496), with a large statue of the Madonna, four saints, and relievi from the life of Christ; the altar of Mary in the Pilgrimage church at Creglingen (A.D. 1487); the splendid altar in the collegiate church at Herrenberg, completed by Heinrich Schickhard in 1517; a large altar in the northern side aisle of the

Church of the Holy Cross at Gmünd, containing the genealogy of Christ of the root of Jesse, and the so-called holy pedigree of Christ, formerly a very favourite subject; a large number of carved altars in St Michael's church at Hall, Swabia. One of the most famous works of the year 1498 is on the high altar of the Kilian church at Heilbronn. Not less important is the noble high altar of the cathedral at Chur, executed about 1499 by Jacob Rösch. In the minster at Breisach there is a carved altar with statues of saints and the coronation of the Virgin (A.D. 1526); and one of the most magnificent of these works is the altar in the church of St Wolfgang in Upper Austria, completed by Michael Pacher in 1481. (Fig. 105.) The German wooden carved altars were introduced even into Poland and Hungary, as is shown in the numerous altars of the Elizabeth-church at Kaschau, the Jacob's church at Leutschau, the parish church at Bartfeld, and especially in the high altar of the Lady Church at Cracow, executed by Veit Stoss between 1472–1484. In Nuremberg we find numerous, although mostly unimportant, carved altars in St Lorenz, St Sebald, St Jacob, and one (especially valuable) in the little church of St John's. We see altars by Master Michael Wohlgemuth of Nuremberg in the Cross Chapel of Haller before the town, in the Lady's Church at Zwickau, erected about 1479, and in the church at Schwabach, A.D. 1507. On the Lower Rhine are found excellent works of this kind in the minster at Xanten, and in the cloister church at Calcar. Westphalia possesses a great

number of handsome carved altars, among which the high altar of the parish church at Vreden and the colossal altars of St Peter's Church at Dortmund, and of the church at Schwerte (the last A.D. 1525), are especially worthy of notice. In the Saxon countries are to be specially observed the altars of the Ulrichs Church (1488), the Newmarket Church, and the Moritz Church at Halle. In the countries on the Baltic are the splendid high altar in the cathedral at Schleswig, completed by Hans Brüggemann in 1521; several works in the cloister church at Doberan, the Nicolai churches at Rostock and at Stralsund, in the Mary churches at Griefswald, Köslin, Kolberg; an especially early and original one in the church at Tribsees; and several in the Mary churches at Danzig and in Lübeck. Further, in the Brandenburg countries are the high altar of the church at Werben, and the handsome winged altar in St Mary's church at Salzwedel. Lastly, Silesia has similar works to show in St Elizabeth, the Corpus Christi Church, and St Magdalene at Breslau.

In opposition to the monumental altars, which until now we have been considering, a few remarks must be made on the *portable altars*, which were commonly used during the whole Middle Ages. Even in the early Christian times there existed portable altars (*altaria gestatoria, viatica, itineraria, portatilia*), which could be carried about, so that the offering of the mass could be performed in any place. In the eighth century, according to the testimony of Beda, the brothers Ewald had

such altars in their missionary journeys. The like is related of the monks of St Denis, who accompanied the army of Charlemagne in his crusades against the Saxons. The portable altars consist, as a rule, of a rectangular stone, generally of a precious stone, as marble, agate, porphyry, onyx, amethyst, in a frame of gold or gilt copper, set with precious stones, nielli, or enamels. A wooden table forms the back, which is also richly adorned. The relics are under the stone slab, or enclosed in the corners of the frame. Sometimes the portable altars have wings, so that they take the forms of diptychs or triptychs, the decoration of which consists either of ivory, of precious metals, or of paintings. If it was required to use larger relics, the portable altar received the form of a shrine, like a sarcophagus, which generally rests on the claws of animals. We find Romanesque portable altars in the church of the Virgin at Treves (travelling altar of St Willibrod), in the treasury of the cathedral at Bamberg, in the cathedral at Paderborn, two in the treasury of the chapter-house of Melk, several in the archiepiscopal museum at Cologne, and in the Royal treasury chamber at Hanover, also a number in the art chamber of the new museum at Berlin. Belonging to Gothic times is the small original wing-altar in the sacristy of the church at Kirchlinde in Westphalia, another, also of the fourteenth century, in the collegiate church at Admont in Steyermark, a third, of the year 1497, in the Germanic Museum at Nuremberg.

EVANGELICAL
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II.

ALTAR FURNITURE.

BESIDES the crosses, the candlesticks, and the reliquaries, to which we will devote special chapters, there are to be mentioned, as altar furniture, the chalices with their appurtenances, the ciboria and the pyxes, the liturgical books, the incense vessels, the oil-vessels, the cruets, and the mass-bells.

CHALICES AND PATENS.

Among the consecrated vessels of the Church the cup takes the chief place. In the first ancient Christian times, wooden or glass cups were used in the performance of the mass; but even in the times of the Diocletian persecution, that is in the third century, golden and silver chalices are mentioned. In the succeeding periods these precious metals were the exclusive material, which received still greater value by artistic decoration, that is by nielli and precious stones. The chalice consists of three parts,—the foot, for standing on, the stem, for holding by, the goblet or cup for drinking out of. We must distinguish between the smaller mass

chalices appointed for the ordinary use on the altar, and the sacramental or ministerial chalice appointed for the distribution of the supper, before the cup was withheld from the laity. The distribution of the wine was made by means of a small pipe (*fistula* or *calamus*) of gold, silver, or ivory, which was provided with one or with several handles. Two such fistulæ of silver, of the end of the twelfth century, are still preserved in the chapter-house of Wilten in the Tyrol, with the handsome sacramental cups belonging to them. A similar one of the

Fig. 106.—Chalice at Wilten.

thirteenth century is found with the cup in the chapter-house of St Peter at Salzburg. These chalices have, on account of their considerable size, two handles on the upper edge for holding.

Among these chalices we must distinguish the handsome pontifical ones, used on occasions of festival instead of the common mass chalice, and, besides these, the *travelling chalices*, which were small, and often made for taking to pieces, as the one in the chapter-house of the monastery of Neuburg, preserved from the fourteenth century; and the *funeral chalices*, mostly small, and of worthless metal, which were accustomed to be put into the grave with the bishops as a special kind of travelling chalice. Such a grave, or sepulchral cup, of the eleventh century, which was found in the tomb of the Bishop Frederick of Münster (who died 1084), is preserved in the Mauritius church at Münster. Quite void of ornament, and only of brass, it is worthy of notice on account of the noble manner of its membering. (Fig. 107.) On the foot we see the engraved cross, which, being the sign of consecration, must not be wanting in any mass chalice. Another grave

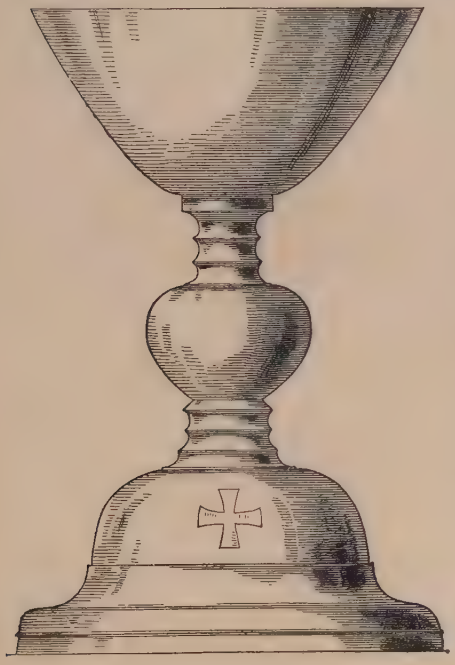


Fig. 107.—Chalice from St Mauritius at Münster.

cup, of irregular and rougher form, found in the tomb of Bishop Hezilo (died 1079), is shown in the cathedral at Hildesheim.

The oldest of the chalices known in Germany is in the monastery of Kremsmünster, and its inscription bears witness to its being the gift of the Duke Tassilo, who founded the monastery in the year 777. (Fig. 108.) Its form is primitive and little ornamented: the foot and stem mingling together, and only the strong hollowed-out cup (six inches wide) separated from the lower parts by a string of pearls. The height of the

Fig. 108.—Chalice from Kremsmünster.

Fig. 109.—Chalice of St. Remigius.

whole cup amounts to ten inches; the material is copper, which is covered with silver melli and with gilded orna-ments. The half-length portrait of Christ and of several

saints, which in medallion fields, cover the cup and the foot, show a barbaric roughness. In the late Romanesque epochs the chalices receive a sharper relief of the principal parts, the round foot is more widely spread out, the stem springs strongly up, and the cup is in the form of a half ball. One of the handsomest chalices of the late Romanesque times is in the Church of St Catharine at Osnabrück, completely covered with fine arabesques of pierced filigree work. Still richer is the pontifical cup presented by Bishop Bernhard (died 1153), in the Godehard church in Hildesheim, in silver gilt, with four representations in relief out of the Old Testament, and as many more out of the New, besides being ornamented with filigree work and with precious stones. We find other famous cups of the late Romanesque times, although really belonging to the thirteenth century, in the Nicolai Church in Berlin, in the Cloister Church at Zehdenik, in St John's Church at Werben, in the Apostles' Church at Cologne, and in the Museum at Basel. We give as an example the richly-decorated cup of St Remigius, which has come to the Imperial Library in Paris from the cathedral of Rheims. (Fig. 109.)

Gothic art alters not only the form, but also the decoration of the cup. Conformably to the law of Gothic architecture, the general form becomes slimmer, the architectonic membering more manifold; the pictorial decoration, on the other hand, is poorer; so that in richness and beauty no Gothic cup can compare with the best of the Romanesque time, and it is only the finer membering,

and the contour, often especially beautiful, which lend it so particular a value. The foot receives the form of a hexafoil instead of the original round one. The stem is furnished with six round or cornered peg-shaped projections. The cup rises up in a straight line like a funnel, or, if the hollowing out is retained below, it rises up as a whole still higher. The shaft, which unites the parts, is no more round, as in the late Romanesque times, but polygonal. The ornamentation is generally limited to the foot and the stem, but sometimes it extends to the lower part of the cup. Pictorial representations rarely occur, and

Figs. 110 and 111.—Chalices at the Monastery of Neuburg.

then only as poor engravings; architectonic ornament plays the chief *rôle* here, as everywhere else in Gothic art. To the more important cups of the Gothic epoch belong the golden St Bernard's chalice, in the cathedral of Hil-

desheim, the decoration in precious stones and the sculpture of which still rest on the Romanesque tradition. The chapter-house of the monastery of Neuburg possesses two richly-ornamented chalices, on which are still enamels and ornaments in filigree work, the one A.D. 1337, the other certainly belonging to the same century. (Figs. 110 and 111.) There are two cups in the cathedral of Minden, two others in the John's Church at Osnabruck, and several in the cathedral there, among which is an especially rich golden one. Simpler Gothic chalices are to be found in great numbers almost everywhere.

By the side of the chalice is found, from the early Christian times, the paten, a flat, shallow dish, for the reception and distribution of the consecrated bread. Every chalice has its proper paten, worked out of the same material, suiting as a cover for it. Before the consecrated bread received the form of wafers, which it did about the twelfth century, larger dishes were required, as then the ministerial cups appointed for the laity had their own proper large patens. Besides, already in the early Christian times, there were the *patenæ chrismales*, which received the chrism for baptism and confirmation. Even the oldest of the mass patens show engraved illustrations, and those of the Romanesque period are mostly covered with engraved or enamelled pictures, often on both sides, while ornaments in relief were retained principally on the borders. In the Gothic period the patens also were for the most part tastelessly formed.

One of the oldest patens existing, with the golden chalice belonging to it, preserved in the church at Werden, is equally with the chalice, quite tasteless, and only provided with an inscription. The paten belonging to the ministerial chalice at Salzburg contains in the centre the Lamb of God, and around is engraved the Supper. The paten of the cup in Wilten, about nine inches in diameter, is decorated on both sides with pictures—on the lower one with a relief of the Crucifixion. The paten of the chalice in the Godehard's Church at Hildesheim is covered with gold filigree, pearls and precious stones, while that belonging to the Bernward chalice shows on its back engraved representations.

2. CIBORIA, PYXES, AND MONSTRANCES.

To preserve the consecrated bread (*the Eucharist*), round boxes of ivory, also of wood or precious metals, were used in the early Christian times. Ivory boxes, covered as a rule with illustrations in relief, are found even now in museums, church treasuries, and also in private possession. There are the marvellous pyxes (πυξὸς, a box) in the new Museum at Berlin, on which we see the youthful Christ with the Apostles, and the offering up of Isaac, in a manner of treatment closely resembling the Roman antique. A similar vessel is in the collection of the Antiquarian Society at Darmstadt. A pyx with simple fine ornamentation and a tent-shaped cover is in St Gereon at Cologne. It seems by its form to resemble

the so-called tower (*turris turriculum*), which also was used very early as a holder of the Eucharist. A favourite form of these vessels was that of a dove (*peristerium*), as an emblem of the Holy Ghost. These doves, of gold or silver, and sometimes of enamelled copper, stood on a dish, which hung down on cords

Fig. 112.—Peristerium.

from the top of the ciborium. In Germany three such peristeria are known,—those in the cathedrals of Salzburg and Erfurt, and in the church of the monastery of Göttweih. On account of all these vessels for the host being hung over the altar, they were also called *suspensio;* but they received as well the name of altar-baldachins, *ciborium.*

Since the rejection of the real altar-baldachin, this last name has been given to the cup-shaped vessels which are finished at the top by protuberant or tower-shaped cupolas, out of which, in the present day, the consecrated host is given in the Roman Catholic Church at the Lord's Supper. These ciboriums, made of brass or of precious metals, are, in the Romanesque period, formed like a cup, with a round contour, and covered with sculpture. There is an excellent work of this kind in the treasury of the Church of St Maurice at Wallis; another, of the twelfth century, at Alpais, in France. In the Gothic period the ciboriums received a slimmer, tower-shaped form, and bear, in their construction, membering, and ornamentation, the character of that period of art. From amongst the number of the vessels still existing of this kind, we name the ciboriums in St John's Church and in the Great St Martin at Cologne; the one, two feet high, in the church of the village of Upper Millingen, near

Fig. 103.—Gothic Ciborium from Kees.

Rees (Fig. 113), on the Lower Rhine; a ciborium in the Roman Catholic church at Dortmund; an especially rich one in the church at Dülmen in Westphalia, with the figures of the Apostles in relief; one in the cloister church at Zinna; another in that of the Jüterbog; lastly, one of the richest, with enamelled representations, in the collegiate church at the cloister of Neuburg.

The monstrances are the most recent in the list of sacred vessels. They arose from the occasion of the festival of Corpus Christi, the celebration of which first became general about the beginning of the fourteenth century. In order to show the *Venerabile* on this occasion to all the people, and to bear it up in the procession, art created out of the most beautiful forms of Gothic architecture this worthy and handsome holder, which offered to sight the consecrated host, in a costly case, for the adoration of the faithful. The foot for its stand, and the stem for holding it by, are formed in imitation of the corresponding parts of the chalices and ciboriums; but the upper part, as a rule, was developed into three beautiful pierced peaks, of which the middle rises higher, and the side ones are finished below as brackets. In the centre is seen, in a four-cornered space, the host, which is protected by a crystal glass, surrounded by a socket of a half-moon shape. The earliest monstrances seem to go back as far as the beginning of the fourteenth century; the majority, and among them the most splendid ones, belong to the fifteenth century; some must be referred to the first ten years of the sixteenth. Soon after, with the introduction

Fig. 114.—Monstrance in Seiltz.

, of the Renaissance, their form is completely altered, and they take that favourite shape of a sun, which surrounds the consecrated host with a crown of rays as if with a nimbus. It is to be understood that the monstrances of the Middle Ages, in their construction and in their decoration as miniature copies of Gothic buildings, faithfully follow the changes of style of the contemporary architecture. Still the supports, the pinnacles and tracery, the crockets and flowers, are modified according to the material suitable for them; and as the monstrances, as a rule, consist of a precious metal, generally of silver gilt, the metal style is rendered apparent in this form. Wooden monstrances occur, but only

exceptionally, as the later Gothic one, which is over four feet high, in the cathedral at Freising. In poorer churches they were contented with brass or gilt copper. The largest monstrances (there are some even five feet high) were evidently only intended for being placed on the altar, and sometimes show two handles for being carried by. One of the most beautiful and largest monstrances is that about three feet high in the Cathedral of Cologne; one of the like size is in the Columba Church there; another in the Minster at Essen. In Westphalia, the church at Bocholt possesses an especially handsome one; the collegiate church at Vreden one equally beautiful; the church at Ostenfeld another. Among the Saxon ones, that in St Godehard at Hildesheim is distinguished by its size and beauty; in Bohemia, the castle at Sedletz possesses a splendid *chef-d'œuvre* (Fig. 114). Others are found at Hall, in Tyrol, quite five feet high; in the cathedral at Brixen; in the church of the monastery of Neuburg, at Tegernsee, &c.

3. LITURGICAL BOOKS.

The books used from the earliest times at the altar-service are the *Missal*, the *Sacramentarium*, which has nearly the same contents, the *Evangelarium* or the *Evangelistarium*, containing the Gospels, the *Lectionarium*, containing the Epistles, the *Benedictionarium*, and the *Antiphonarium*. Among these, the most general and the most important is the *Missal*, which, resting on a wooden desk, is placed on the Epistle-side

of the altar, and only when the Gospel has to be read is it carried over to the other side. Even in the earliest Christian period they delighted in the handsome decoration of these books, which consisted in an illustration of the text by painted pictures, or miniatures, and in placing them in costly bindings. The oldest codices were mostly bound in antique *diptychs*, ivory writing-tablets, which were ornamented on the outside with reliefs. As these tablets were not, as a rule, sufficient, they were surrounded with broad frames of gold and silver plates, which were covered with pearls, precious stones, gems, and cameos, with filigree work, enamels, and nielli. In the Romanesque epoch such handsome covers were prepared in great numbers, and the crucifixion was, as a rule, introduced into the centre as the chief illustration. Whatever they possessed in costly materials and in skill was directed to the embellishment of such bindings. Still, this rich decoration was exclusively for the front cover, while the back one was, as a rule, kept plain.

The most numerous and handsome of these works belong to the early Middle Age period until the end of the eleventh century, that time which, especially in Germany, shows the rise of literary and classical studies. In the twelfth century the number of these works already fall off remarkably; and in the Gothic epoch their artistic decoration sinks down, with rare exceptions, to the level of mediocrity in material and workmanship. To the most valuable of the early times belong two in the cathedral at Halberstadt, the one with an antique con-

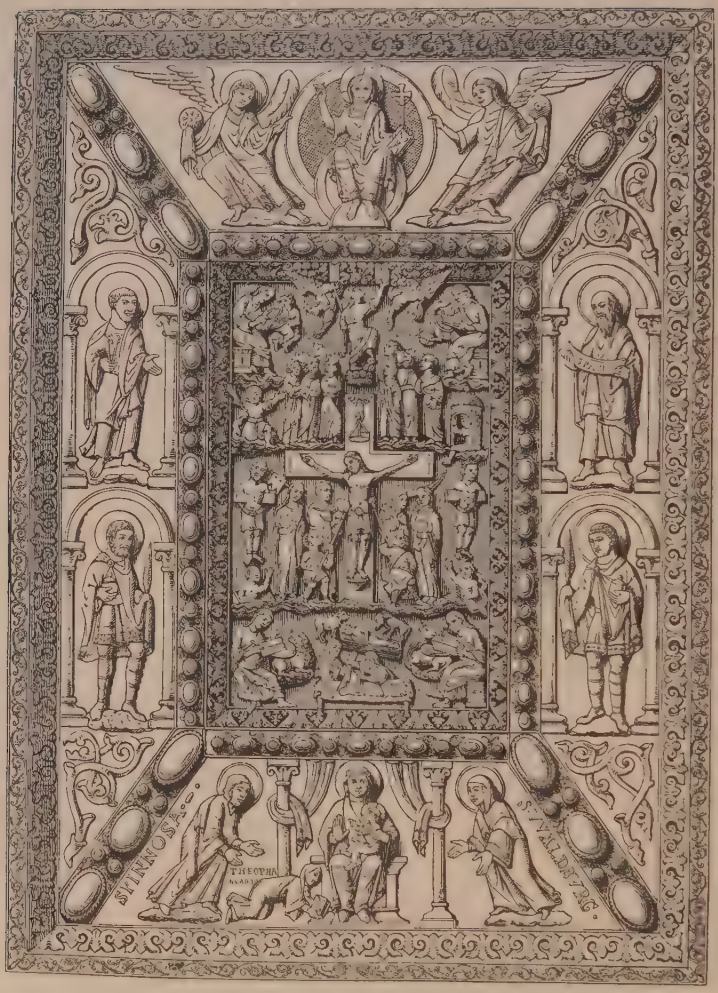


FIG. 115. Cover of a Book in the Treasury of the Collegiate Church at Essen. *See page* 151.

sular diptychon, one bequeathed by Bernward (died 1022), in the cathedral at Hildesheim; several handsome ones, part of a present from Henry II., in the libraries at Bamberg and at Munich, where are found other wonderful works of this kind. Besides the libraries of St Gallen, Darmstadt, Gotha, the university library at Würzburg, the cathedral library at Treves, the treasury chamber of the collegiate churches at Quedlinburg and at Essen (Fig. 115), the town libraries at Hamburg, Frankfort-on-Maine, and Leipzig, the royal libraries at Dresden and Berlin possess examples of such handsome bindings, which for the most part belong to the eleventh century, but many to a still earlier time. The later works we can conveniently pass over.

4. OTHER FURNITURE AND VESSELS.

We will now treat of the *censers* and *incense-cups*. The latter, generally in the form of small ships (incense ships, *naviculæ*), have a double lid for opening, and sometimes, on the outside, engraved illustrations. A spoon belongs to it, with which the priest takes out the frankincense, and throws it into the *censer*. This last is, often even in the Romanesque period, an ornamental vessel treated as a cupola building, the basin of which receives the glowing coals, while the smoke escapes through the window-like openings of the cupola lid (Fig. 116). Four chains, fastened to the top edge of the basin, and going through the holes of the lid, are united in a small round disk, to which a ring is attached, as

a handle for the priest or assistant swinging the censer. In the earlier times bronze and copper are the materials used, but in the later times mostly silver, but also sometimes brass. We see Romanesque censers in the museum at Freising, in the cathedral at Treves (one silver and one of gilt copper), and in the archiepiscopal museum at Cologne. The Mauritius church at Münster possesses a beautiful early Gothic one, which in its general form retains yet the Romanesque character (Fig. 117). The later Gothic art ever gives to these works a slimmer form, and, by furnishing them with supporting piers, pinnacles, and tracery-work, makes them conformable to their system of architecture. We find such in the cathedral and in the Bustorf church at Paderborn, in St Albans at Cologne, in the churches at Orsoy and Elsenberg on the Rhine, and an especially rich one at Seitenstetten (Fig. 118).

Fig. 116.—Romanesque Censer from Lille.

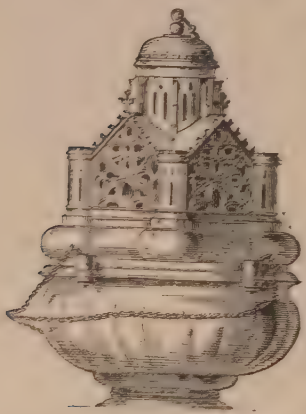


Fig. 117.—Censer from St Mauritius in Münster.

FIG. 118. Censer at Seitenstetten. *See page* 152.

Then there still belong to the altar-service the *host-boxes*, made of wood, of ivory, or also of metal; the *oil-vessels*, very varied in form and material, destined for the reception of the oils appointed for those to be confirmed, those to be baptized, and the sick; the larger and smaller

Fig. 119.—Manile from Herford.

holy-water basins [*Bénitier* in French] consecrated for sprinkling, which are sometimes of a beautiful material, as the ivory one in the cathedral at Milan, and one from the minster at Aix-la-Chapelle, both of the Romanesque times; *cruets*, for water and wine, which always

have their place together on a presentation plate on the Epistle-side of the altar; and lastly, the *pouring* vessels (*manilia*), for the washing of hands, which, in the Middle Ages, they used to form like an animal, or in some other fantastic shape. These vessels often occur as a lion, a horse, a dove, a hen, and in many other forms. A *manile*, formed as a siren, is to be seen in the John's Church at Herford (Fig. 119); one as a lion in the church at Berghausen, in the Westphalian governmental district of Arnsberg. Here we may mention also the *mass-bells*, with which were given the signs of the principal moments in the sacred service.

Fig. 120.—Wheel of Bells from Gerona.

Some were arranged in an artistic manner, so that a number of bells were united on a small wheel, which turns on an axis, and is moved by a cord. They were introduced on the wall of the choir near the altar. We give Fig. 120 as an example from the Cathedral of Gerona, in Spain. The largest arrangement of bells of this kind is in the Abbey Church at Fulda. It has the form of a large star, which is richly mounted with bells, and was made of bronze in the fifteenth century.

Here we may, lastly, find place for a description and view of a vessel out of St Mauritius in Münster, the

destination of which is not quite understood (Fig. 121). Executed of silver in the noble Gothic style, and in its beautiful proportions it has nearly the form of the Gothic chalice; only that, instead of the cup, a flat slab of tin, crowned with an ornamental flowered frieze, forms the termination. A picture of the Madonna is engraved on the slab. Out of the upper cover protrude the ends of three metal staves, bent in the shape of hooks, which are ornamented with busts bearing coats of arms. If we press a spring concealed in the hollow foot, the three staves come further out, and, moving outwards, take up a position which makes them suitable to serve as a pedestal for another vessel. It is thought that they formerly bore a cup, which, at the Christmas festival, served the priests for the ablution of the chalice between the high masses.

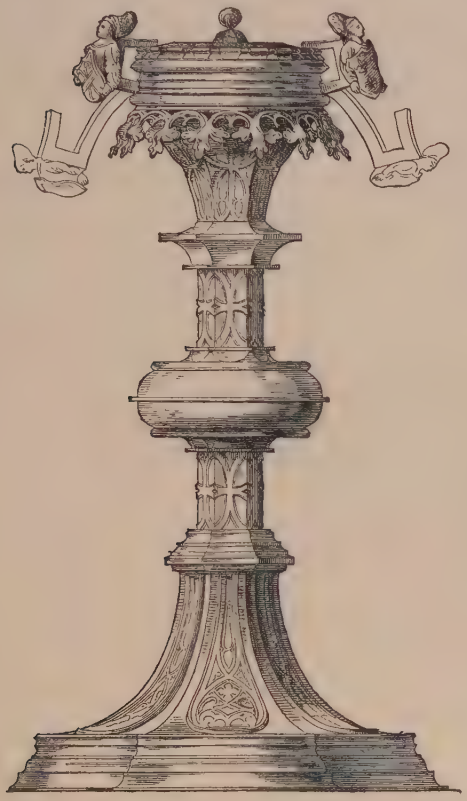


Fig. 121.—Vessel from St Mauritius near Munster.

III.

CROSSES AND RELIQUARIES.

1. CROSSES AND CRUCIFIXES.

IT is generally acknowledged that, even in the earliest times, the cross received, among Christians, the highest veneration as the sign of salvation. It appears numerously on the sarcophagi, and on the other monuments of the earliest Christian countries, either in the form resembling the letter T (*crux commissa*), or as a cross with sloping arms (*St Andrew's cross*, *crux decussata*), or in the form also now generally used, with four crossing arms, of which the lower one is longer than the rest (*crux immissa*). By the side of these occurs also the Greek cross, with four equal arms. Of the last two kinds none are to be found before the fifth century. Even during the Diocletian persecution, costly crosses of gold and silver are mentioned, which were borne by the faithful on their breasts. Constantine had erected on the grave of St Peter a golden cross 150 lbs. in weight. We see crosses ornamented with jewels and flowers on the painting of the Catacombs of St Ponziano

(Fig. 122), and on the sarcophagus of Probus at the end of the fourth century. Soon after, the cross was borne also in ecclesiastical processions. The most important place for the exhibition of this most sacred symbol was the altar, where it at first crowned the ciborium, as it still does in several Romanesque basilicas, or it hung on a chain from the ciborium. When the ciboria were given up, the cross received its place either on the altar-table itself, where it is still at present set up, or on the back wall. In most cases, in the earliest times, a plain cross sufficed; but those with the form of the Crucified One—viz., crucifixes—frequently occur.

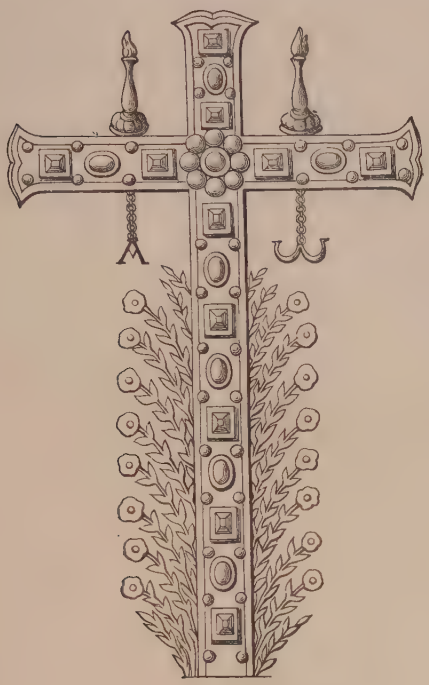


Fig. 122.—Cross of St Ponziano.

The Romanesque period used great luxury with such crosses, which generally consisted of wood, covered with precious metals, and ornamented with jewels, gems, pearls, enamelled representations, and filigree ornaments. In the earliest, the figure of Christ is still youthful, beardless, the hips surrounded with a garment, the feet

standing, without any mark of nails, on a board, or also on a cup. The ends of the cross arms are formed broader, and receive, as a rule, the symbols of the Evangelists. The back is generally covered with en-

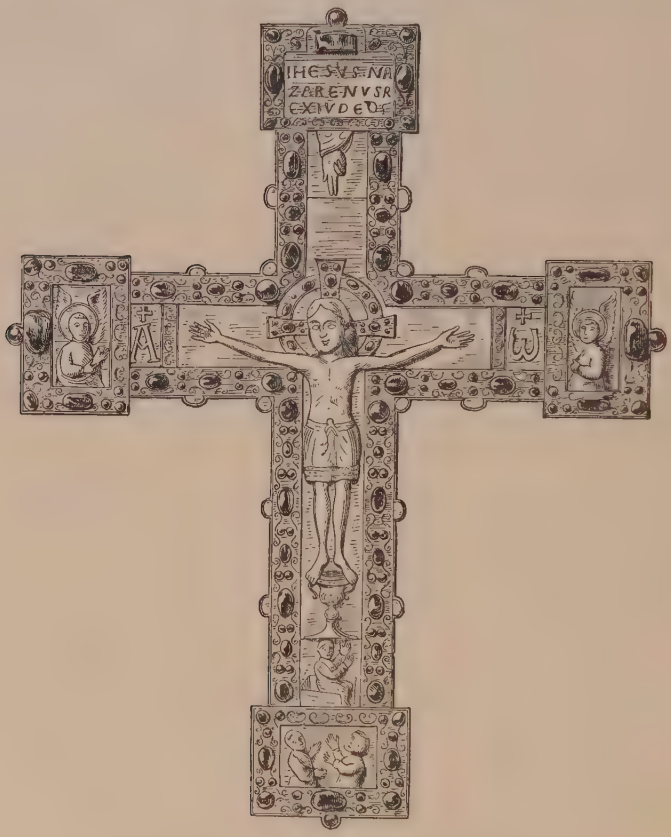


Fig. 123.—Cross from St Mauritius at Munster.

graved representations. Sometimes such crosses, by the reception of relics, such as a splinter of the Cross of Christ, obtained the character of relic crosses. Of a similar kind are the crosses which are borne in proces-

sions; and here it may be remarked, that the same crucifix served often for both purposes, according as it was fastened to a pole or on a pedestal. In the treasury of the Mauritius church at Münster we find such a reliquary cross, of the early Romanesque period, about the end of the eleventh century, with the youthful Christ, whose feet stand on a handled chalice (Fig. 123). Jewels and filigree ornaments adorn the flat parts; on the back we see, in embossed work, the lamb with the flag of the cross, and the symbols of the Evangelists. Other similar crosses of that time are found in the collegiate church at Essen; in the treasury of the minster at Aix-la-Chapelle; an ivory one in the cathedral at Bamberg; and a late Romanesque one in the cathedral at Münster. On the other hand, the cathedral at Osnabrück possesses, besides two silver crucifixes of the thirteenth century, a large cross overlaid with thin plates of gold, ornamented with filigree work, and many precious stones, among which there are eight antique gems and two large cameos, which only at the top shows a small engraved golden crucifix. A similar barely-ornamented cross, but having on the back engraved representations of the lamb and of the symbols of the Evangelists, is in St John's Church there. Copper and bronze crucifixes often occur in Romanesque times. A bronze one of the twelfth century, with a sculptured pedestal, is to be seen in the Soltykoff collection in Paris (Fig. 124).

In the Gothic epoch the crosses were formed more architectonically, that is, the ends of the four arms spread

out as trefoils. In the altar crosses the pedestal, and in the processional crosses the poles, were then membered in a suitable manner. Besides the precious metals, brass and painted wood appear as materials. In fact, those colossal crucifixes which were placed on a cross-beam under the triumphal arch of the church, are of wood. A beautiful early Gothic cross of gold, ornamented with precious stones, is in the cathedral at Ratisbon (Fig. 125). A metal crucifix of the middle of the fifteenth century, with a richly-ornamented staff of magnificent workmanship, is in the cathedral at Osnabrück. Three similar ones, also with their metal staves, are in St John's Church there. A richly-ornamented silver crucifix, of the beginning of the sixteenth century, is in the cathedral at Minden.

FIG. 124.—Cross of the twelfth century in the Soltykoff Collection.

It was also customary to set up crucifixes of magnificent workmanship separated from the altar. Thus, a handsome cross stood in the cathedral at Hildesheim,

on the bronze column now set up in the courtyard, which Bishop Bernward had cast in the eleventh century.

Fig. 125.—Gothic Cross.

2. RELIC-HOLDERS, RELIQUARIES.

Reliquaries belong, from the early Romanesque times, to those specially favourite objects of veneration which were decorated with all splendour and artistic skill. This use also arose in the early times of Christianity from the remains and mementoes, and even the bodies, of the martyrs and of other saints being taken out of the catacombs, to be used not only for the consecration of altars, but also for amulets. Such small holders were generally worn on the breast, from which they receive their name, *encolpia*. They were mostly small rectangular caskets, of precious metals, or of common materials, ornamented with the emblems of Christ, or with biblical illustrations. Two golden encolpia of this kind were found in the sixteenth century in the grottoes of the Vatican. Such relic-holders also early occur in the form of a cross; especially the handsome crosses which even then the bishops were accustomed to wear on golden chains on their breast. Such a cross was found lately by Cavaliere de Rossi among the rubbish of the ancient Basilica of St Lorenzo, outside the walls of Rome, on the breast of a corpse (Fig. 126). That the use of reliquary crosses was extraordinarily general

Fig. 126.—Reliquary Cross from St Lorenzo before Rome.

during the Middle Ages, we have already shown while considering the crucifixes.

The constantly increasing veneration of relics became, during the Middle Ages, the occasion of creating a number of vessels and holders of the most varied forms and sizes, in the variation of which, fancy, and in the rich decoration of which, the capability of art of the different epochs found an expression as brilliant as characteristic. The simplest holders of such relics are the numerously-occurring caskets and round boxes of ivory, adorned with ornaments or with reliefs, also caskets of fine kinds of wood, or such as are covered with embroidery or enamels. By the side of these, even early, occur vessels valuable from the material or artistic work of precious metals, costly stones, glass, ivory, and such like, which are turned into relic-holders, in the shape of cups, chalices, cans, bowls, and even hunting-horns. Perhaps the most valuable, at any rate the most significantly artistic work of this kind, is an antique onyx vessel, with a relief picture in the style of Greek art, in the treasury of the Abbey Church of St Maurice in Wallis, according to tradition, a present of Charlemagne. The variety of such holders is quite inexhaustible, as the zeal of the faithful in the Middle Ages turned into reliquaries the handsomest things which possession or skill could suit to the purpose. If the whole body of a saint, or numerous particles of one or of several bodies, were to be enclosed, the form of a sarcophagus with a gable roof was taken for that purpose, which was furnished,

as a small architectural work, with all imaginable pomp. These relic-chests were made of wood, covered with gold plates or silver gilt, the flat surfaces covered with embossed figures, and ornamented with pearls and jewels, with filigree and enamels, so that the goldsmith's art of the Middle Ages devoted every means at their command to these great works. The greatest richness is found here also in the works of the Romanesque time, and so great was the preference for this decorative style,

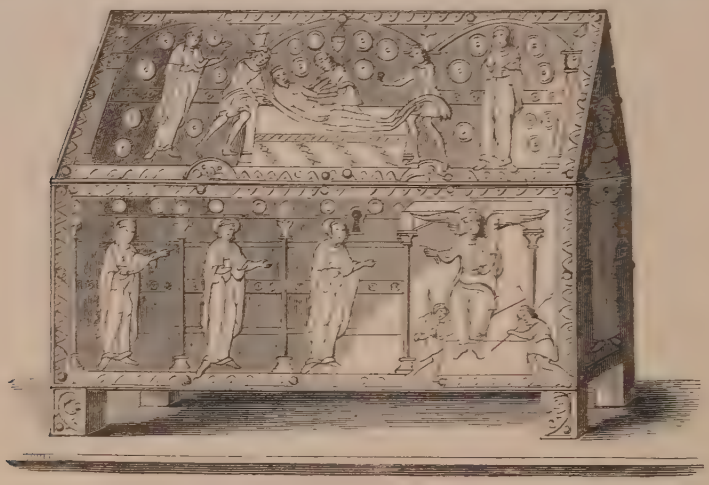


Fig. 127.—Early Romanesque Reliquary.

that its forms are employed even until the end of the thirteenth century. The larger chests are developed, in the late Romanesque times, into small models of churches, with transepts and side aisles; in the arcades of their long sides we see, in alto-relief, or as isolated figures, the Apostles; on the sides of the gables, Christ and Mary, or the saints whose relics are enclosed in

the chest; the surfaces of the roof are ornamented with representations in relief out of the New Testament, or out of the legends of the saint connected with it.

Among the oldest of the chests of this kind still belonging to the eleventh century, are the two wonderful ones set up on the northern side-altar of the church of St Maurice in Wallis. An early Romanesque shrine,

Fig. 128.—Shrine of the Three Kings at Cologne.

with little membering, but richly enamelled, is in the Soltykoff Collection (Fig. 127). Of the brilliant epoch of the Romanesque style we find most of the works of this kind on the Lower Rhine and in Westphalia. In the minster at Aix-la-Chapelle is one, the largest and

most handsome of the end of the Romanesque epoch, the chest of Charlemagne; and in the same place the somewhat later Mary's chest. In Cologne are the shrine of the Three Holy Kings in the cathedral (Fig. 121), which, formed like a church, with low side aisles, is unsurpassed in architectonic structure and the richness of its decoration; the Ursula chest in the cathedral of this saint, with a coffer-shaped semicircular lid: two others, one of which is Gothic, in the same church: the Severinus shrine in St Severin's, and two others in St Mary's in the Schnurgasse. In the parish church at Siegburg there are a great number of Romanesque reliquaries, among others that of St Anno, coming from the collegiate church there. An enamelled chest of the twelfth century is in the town library at Treves: the Heribert's chest in the collegiate church at Deutz: the chest of St Victor in the cathedral at Xanten, all of the twelfth century; and in the church at Kaiserswerth is the Suibertus chest, executed about 1264, also in the Romanesque style. In Westphalia are to be found the two handsome reliquaries of St Crispin and Crispinianus, in the cathedral at Osnabrück; another in the church at Bockum; also smaller ones in St John's Church at Herford, and in the cathedral at Minden. In the cathedral at Hildesheim are the handsome Godehard's chest, and the less rich one of St Epiphanius.

In the Gothic period the richer style of covering, even in these works, disappears, and gives place to a sharper architectonic treatment. The column arcades

make way for the buttress, and the whole apparatus of the Gothic tracery work and the supporting system appears on the surfaces, so that, even to the lowest detail, an imitation of Gothic churches in miniature is striven after. Still, the flat spaces are often retained for representations in statuary, though not quite so exclusively. To the noblest of the old Gothic works belongs the Elizabeth chest in Marburg. The Regina chest in the cathedral of Osnabrück stands on the verge of the transition period; while another, in the elegant style of the fourteenth century, the Cordula chest, in the same place, vies with the splendid rich ones of the fifteenth century. The Patroclus chest from the cathedral at Soest, now in the museum at Berlin, is pure in its architecture, though not so good in its sculpture; it was contracted for in 1313 by the goldsmith Rigefried. The Maccabees chest in St Andrew's at Cologne, quite covered with embossed scenes in relief, the Regina chest in the church at Rhynern, of the year 1457, and one still later, in the church at Bochum, manufactured out of older Romanesque parts, are all late Gothic relic-coffins. In south Germany belong to this period the Cosmas and the Damianus chests, in the church of St Michael at Munich (they came from Bremen), and the Emmeram chest in the church of this saint at Ratisbon, A.D. 1423, a *chef d'œuvre*, with the embossed figures in relief of the Madonna, the Evangelists, the Apostles, and various bishops, among whom is St Emmeram, and the coronation of the Virgin. There also occur, in the late Gothic period,

richly carved reliquaries of wood, decorated with gold and colours; examples of which may be seen in St John's at Cologne, in the collegiate church at Carden, the shrine of St Castor, three in the castle church at Quedlinburg, and one in the hospital church at Salzburg.

Beyond all comparison stand pre-eminent the Sebaldusgrab in St Sebald's at Nuremberg, on account of the noble brass baldachin which Peter Vischer made for it; and the Ursula chest in St John's Hospital at Bruges (Fig. 129), on account of the masterly miniature paintings with which Hans Memling has covered its flat spaces. Lastly, are to be mentioned those shrines which are supported by statuettes of priests or deacons, in allusion to a common custom in processions.

By the side of these larger and small chests and shrines, the relic-monstrances, which appear first in the Gothic period, are the most numerous. They resemble in their form the monstrances already described, only they have a slimmer form, and show in the centre the relic preserved within a glass cylinder. They are still frequently found in many old churches (Fig. 130). By the side of them occur also simple glass cylinders, which are supported horizontally by metal feet at each end. The crystal flasks and the oft-recurring crystal crosses belong to the vessels for exhibition; and for the same purpose trellis openings are often introduced into the sarcophagi, in order to gratify the desire of the pious to obtain a view of the enclosed treasures. Besides these, there occur also relic-tables, rectangular and

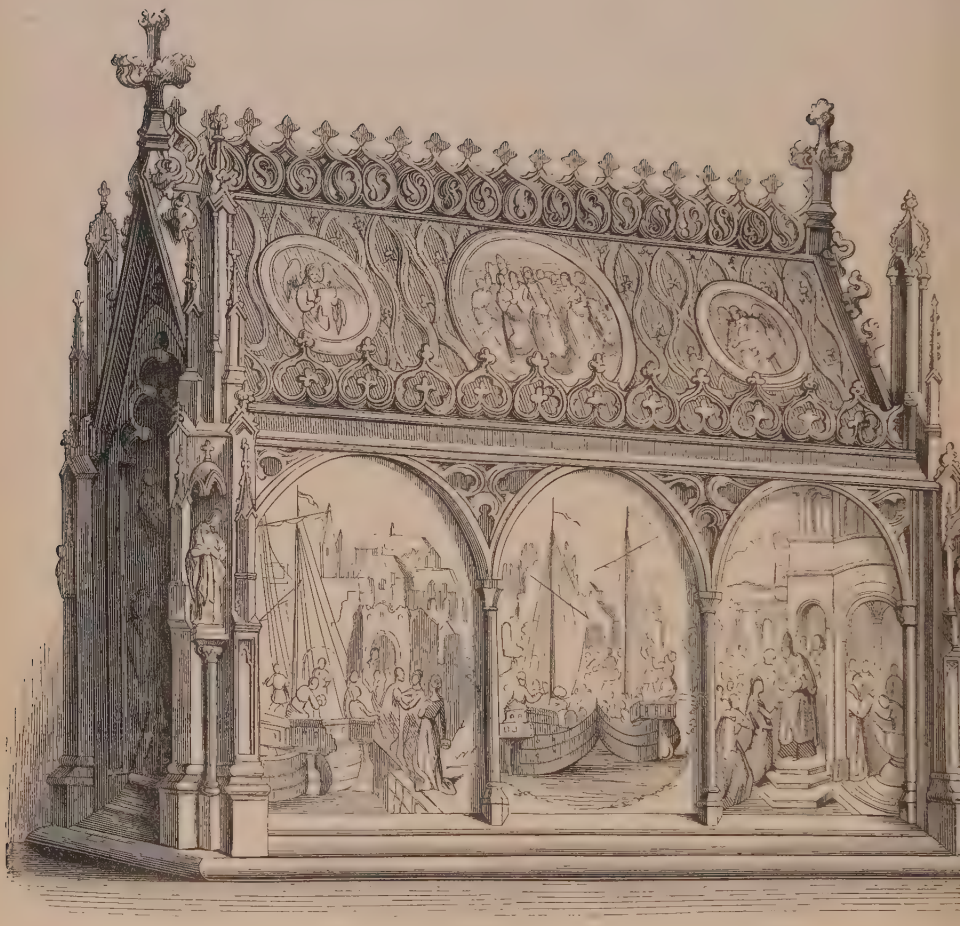


FIG. 129. The Ursula Chest at Bruges. *See page* 168.

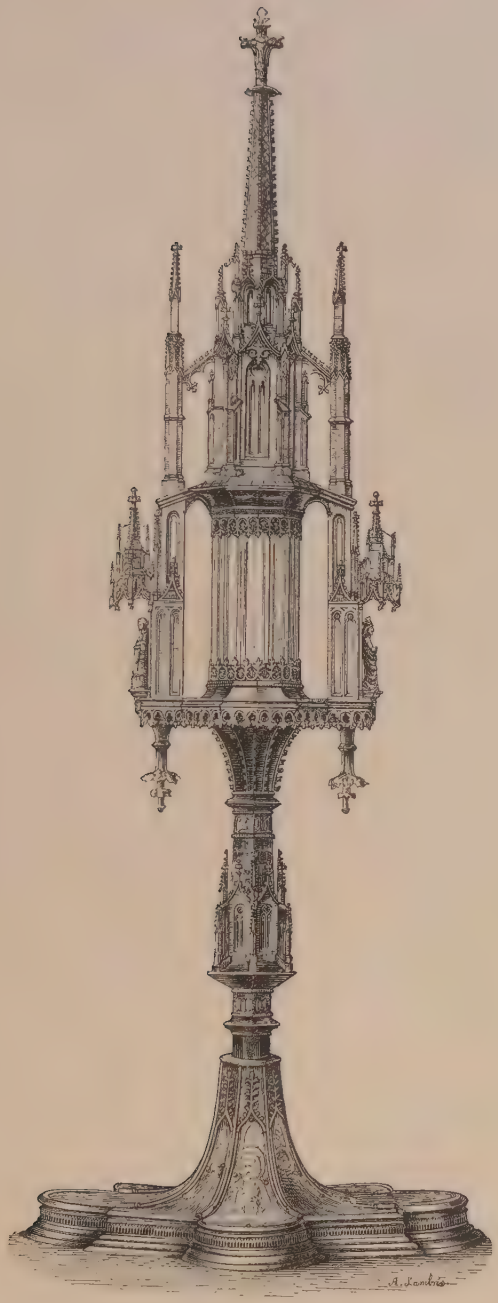


FIG. 130. Reliquary Monstrance from Klosterneuberg. *See page* 168.

round, the former sometimes made to be closed after the manner of the winged altars, decorated with sculpture in the front, and furnished with corresponding pierced frames. To these belong also the *kissing-tables* or *paces*, relic-holders which were offered to the faithful to kiss, and received their latter name from the kiss of peace. Gold and silver with enchasing, ivory and marble with representations in relief, were the materials used.

Yielding still more immediately to the fancy of the faithful are those relic-holders which take the form of the enclosed limb. *Busts* of wood, covered with em-

Fig. 131.—Head from Basle, now in British Museum, 11th century.

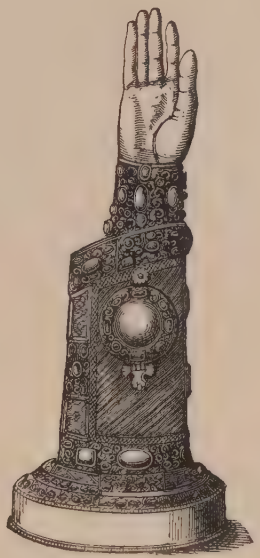


Fig. 132.—Reliquary Arm from Cologne.

bossed gold plates, and ornamented with jewels, are most numerous. The oldest and most wonderful of these works is the head, in embossed silver, of St Mauritius,

in the treasury of the Church of St Maurice in Wallis, magnificently severe, like no later work; on the breast is the representation of the beheading of the saint, in a style which belongs to the ninth century. From the early Romanesque period, probably the eleventh century, originates the head in the monastery of Fischbeck on the Weser, and the head, just as antique, in the British Museum in London (Fig. 131), which came from the minster in Basle. Later works of this kind are in the cathedral at Hildesheim, in St Cunibert at Cologne, in the cathedral at Aix-la-Chapelle (the head of Charlemagne), and, in the cathedral at Liege, the head of St Lambertus. We often find, in a similar manner, the arms (Fig. 132) of the saints represented, and sometimes, for more particular recognition, the attribute is given in the hand. Feet, single fingers, or other parts of the body, rarely occur; on the other hand, statuettes of embossed or of cast metal, as well as of carved wood, are numerous.

Lastly, the form of the emblem or attribute of the saints was sometimes given to the relic-holders. Beautiful *ships*, with perfect imitation of the sails, mast, and rigging, as a sign of St Ursula (as in St Antonio's at Padua); the *dragon* for St Margaret; the *lion* for St Mark; the *sword*, for several saints who suffered death by it (like the handsome sword in the treasury of the minster at Essen), &c

IV.

CHANDELIERS, CANDLESTICKS, SCONCES.

EVEN in the early times of Christianity, the custom must have arisen of having divine service, even in the day-time, with lights. In the beginning of the fourth century such a luxury of light seems already to have been so much used in the churches, that fathers and synods (that of Elvira in the year 305) zealously opposed it; still without any result, for the use became more and more general, and then arose into preciseness the liturgical instruction never to perform the holy sacrifice without burning lights. It is evident that at first they were chandeliers hanging down from the ceiling, which were placed before the presbyterium and above the altars. They were of brass or of precious metals, and had often an exceedingly large number of candles, as that chandelier furnished with 1370 candles, which was presented at the end of the eighth century by Pope Adrian to St Peter's. But even as early as the fourth century, *coronæ*, *phari*, *pharicanthari* are frequently mentioned as presents of the popes. Thus Pope Leo III. presented to the Basilica of St Andrew a golden *corona* adorned with jewels.

Of these most handsome and largest of all church light-bearers, four examples have been preserved in Germany of the Romanesque period. They consist of large rims of metal, either of iron, gilt copper, or silver. In their expressed symbolical relation they were meant to remind one of the Heavenly Jerusalem, and on that account they are fitted up with numerous small towers, and furnished with a battlemented circlet, which served as a support to the single candles. Adorned with engraved and embossed representations of ornamental and figurative art, they belong to the most perfect productions of the art of the goldsmith of that epoch. One of the largest and richest is the one in the nave of the cathedral at Hildesheim, hung up before the choir at the time of Bishop Azelins (1044–1054), about twenty feet in diameter, with seventy-two candle-holders, with twelve larger, and, between them, twelve small towers, in which stand statuettes of the apostles and prophets (Fig. 133). There is a small one there of the same time, with thirty-six light-holders. The chandelier of the monastery church at Comburg, near Hall in Swabia, with its rather stiff statuettes of the apostles and busts of the prophets, but with perfectly beautiful arabesques of creeping-plants and animals, belongs to the end of the twelfth century. Of the same time is that presented by the Emperor Frederick Barbarossa to the minster at Aix-la-Chapelle, which is thirteen feet in diameter, with forty-eight light-holders, the towers with engraved illustrations of the eight beatitudes, and scenes from the life

of Christ in pierced-work. The rim consists of segments of circles corresponding to the building in which it is.

Fig. 133.—Chandelier in the Cathedral at Hildesheim.

In the Gothic period the chandeliers lose their great circumference and their costly structure, but retain generally the wheel-shaped form, without, however, making it as a model of the Christian Jerusalem. On the other hand, we sometimes meet, by the side of the Gothic style, peculiar architectonic ornaments of varied scriptural decoration. A large chandelier of brass in the cathedral at Münster is of such a kind. It consists of a pierced rim, which is furnished with cast statuettes, and ornamented with fine tracery-work like filigree, with pinnacles and pierced little gables.

Similar, but smaller, and furnished with figures in relief and engraved illustrations, is a chandelier in the church at Fröndenberg in Westphalia. An iron chandelier, made in 1489 by Gert Bültink, in the parish church of Vreden, consists of six segments, and is surmounted in the middle, where a pole passing through it holds it up, with a carved wooden statue of the Madonna under a six-sided Gothic canopy, while statuettes of the twelve Apostles stand around on the double rim under smaller canopies. A similar one, also of iron, but of smaller dimensions, is in the Roman Catholic church at Dortmund. A small one, copper painted, with angels as light-holders, is in the cathedral at Lübeck; and a brass one is in the Ægidien church there.

Another kind of chandelier, which belongs first to the Gothic epoch, consists of a centre-piece, which ends below as a bracket, hanging isolated; above, it is terminated by a ring, by means of which the chandelier is fastened to a chain. From the centre-piece shoot out, as a rule, two rows of side arms, which, hanging free, are furnished with flowers of the Gothic style, unfolding themselves as light-holders. An especially beautiful one of this kind, in brass, is in the Roman Catholic church at Dortmund (Fig. 134). A similar one, with a figure of the Madonna in the centre, and angels as light-bearers, is in the church at Kempen; and of the same sort are those in the churches at Calcar and Erkelenz on the Rhine, at Obernkirchen in Westphalia (Fig. 140), and in the cathedral at Ratzeburg. Without the statue

of the Madonna, but with a somewhat heavy architectonic centre-piece, is a brass chandelier at Seckau.

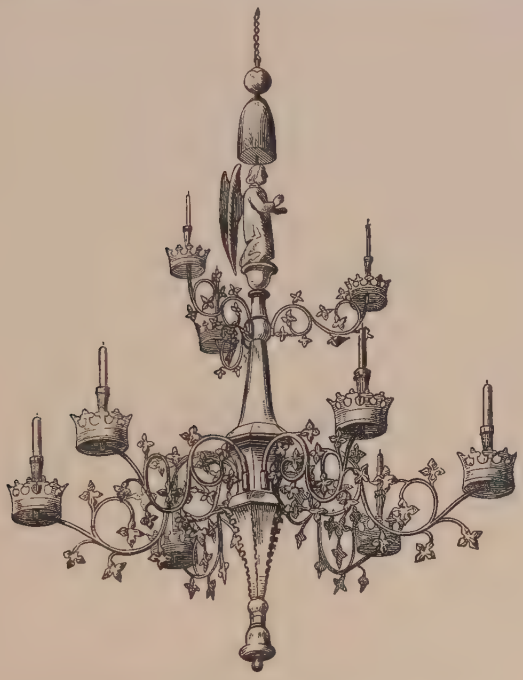


Fig. 134.—Chandelier in the Catholic Church at Dortmund.

Beside the coronæ, are mentioned, even in ancient Christian times, *candlesticks*, *candelabra*, *cereostati*, *lightsticks*. In the fourth century brass candelabra, inlaid with silver, were presented to the churches by Pope Sylvester. The most handsome candlesticks are the seven-armed ones, formed in imitation of the famous Temple candlestick. Of such a kind is the noble bronze candlestick, after the style of the Romanesque period, which the Abbess Mathilda (about 1003) gave to the minster church at Essen, membered by handsome

ornamental bosses (Fig. 135). A similar one, adorned

Fig. 135.—Seven-armed Candlestick at Essen.

with ornaments of the developed Romanesque period, is in the cathedral at Brunswick, fourteen and a half feet

high (Fig. 136), according to tradition a gift of Henry the Lion; others, in St Gangolf at Bamberg, in the Bustorf church at Paderborn, cast of brass; a richly-orna-

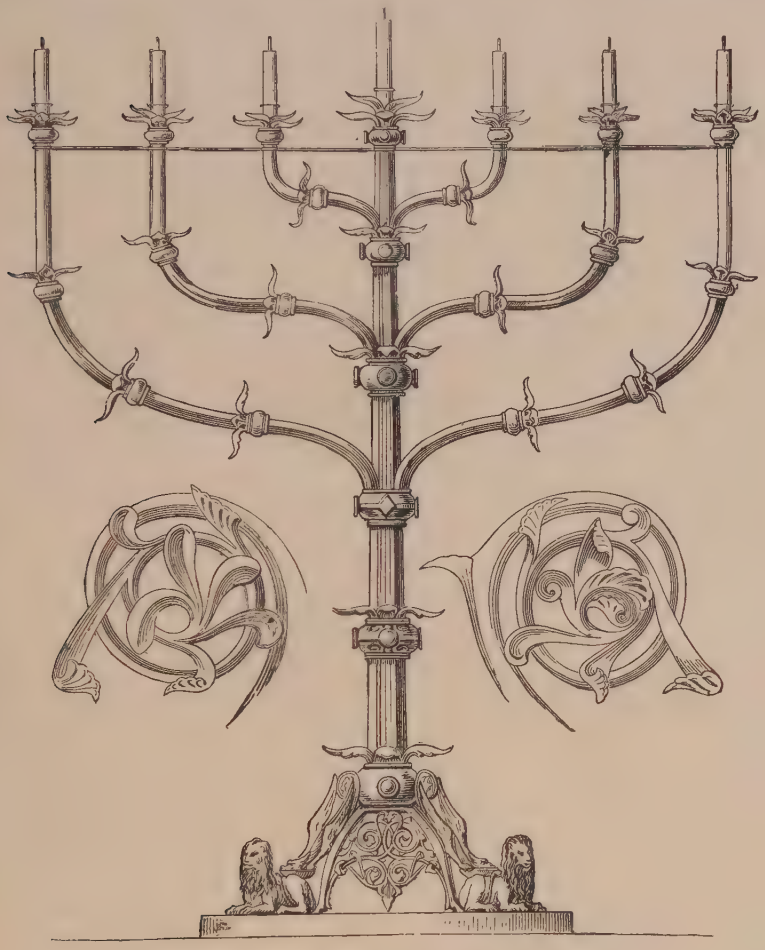


Fig. 136.—Candelabrum in the Cathedral at Brunswick.

mented one (the foot of which has been lost) in the church at Klosterneuburg; on the other hand, the foot

alone of a candlestick is in the cathedral at Prague. The cathedral at Milan possesses the most handsome of all candlesticks.

Among the Gothic candlesticks of this kind, that in

Fig. 137.—Candelabrum at Werben.

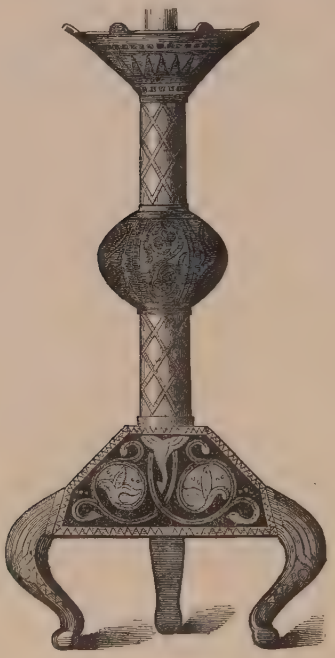
the Marien church at Colberg, cast in 1327 by Johannes Apengheter, is one of the richest. Others are in St Mary's at Frankfort-on-the-Oder, also adorned with sculptured ornament, and in the church at Möllen near Ratzeburg,

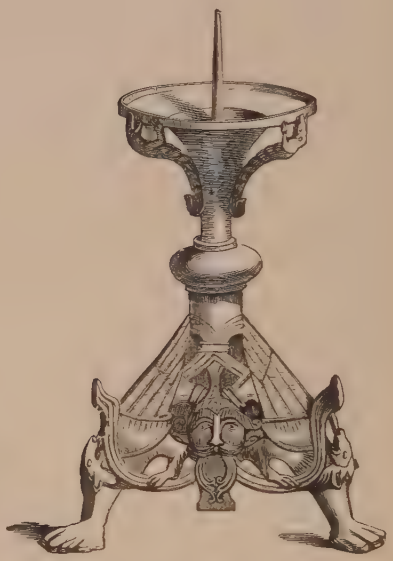
of the year 1436; in the cathedral at Magdeburg is a simpler one of the year 1494; a larger one, but also simpler, is in St Augustine's at Brünn. Then there are found, of the late Gothic period, five-armed ones, as in the St John's at Werben (Fig. 137), in St James's at Perleberg, and in St Cunibert's at Cologne; and three-armed ones in the cathedral at Xanten, and in the cathedral and the Madonna church at Halberstadt.

Besides these large candlesticks, there were also *pergulæ* (espaliers), *herciæ* (harrows), *rastella* (rakes), that is, candlesticks with a broad upper slab, on which many lights can be brought together by the side of one another, and for which the designation in Germany is *kerzstall* (sconce). Also, are here to be reckoned the three-cornered candelabra (*hercia ad tenebras*), as the iron one in the cathedral at Osnabrück. They were used on Good-Friday, and in such a way that, at the singing of the Psalms, the lights were extinguished one by one in rows. Lastly, there are the simple, but generally very large, candlesticks, made for one single very thick taper each, which it was the custom to place before the altars, sometimes in pairs on the steps of it. Stone candelabra of this kind, from the Romanesque period, are in the cathedral at Hildesheim, others, with the addition of metal parts, in the collegiate church at Königslutter, and in the cathedral at Merseburg. Gothic stone candlesticks in the Meadow church at Soest, St John's at Billerbeck, the Martin's church at Wesel, the Pilgrimage church at Wilsnack, and in the cathedral

at Havelberg. Simple candlesticks of brass, but important by their size and architectonic membering, are very numerous in the late Gothic period, such as the handsome one in the church at Schwerte at Dortmund, another in the cathedral at Münster, &c.

From these simple candelabra arose at last the altar candlesticks, which can be proved not to have





Figs. 138 and 139.—Romanesque Altar-lights.

stood on the altars before the twelfth century, but which now are necessary to it. In the earlier times we find only two on an altar, and, as a rule, they also occur in collections as pairs. They are mostly of bronze, and in the Romanesque period are covered with pierced foliage

and creeping tracery-work, with dragons and other animals, often with snakes and fantastic shapes on the foot; but they are often of copper with enamel illustrations. As the latter, in consideration of their painted decoration, were formed with a very simple and little-membered contour, with surfaces as flat as possible, the candlestick, of which we give as an illustration Fig. 138, forms a strong contrast to those treated as sculptures (Fig. 139). Some excellent and especially large ones we see in the episcopal museum at Münster; others in the archiepiscopal museum at Cologne, in the national museum at Munich, in the museum at Freising, and here and there in the treasuries of old churches. In the Gothic times, as a rule, the altar-lights are simple works, cast in brass, without ornament, but often distinguished by noble proportions and fine membering. Of a similar kind are the *lights of the acolytes*, with which the attendant on the priest had to conduct him to the altar.

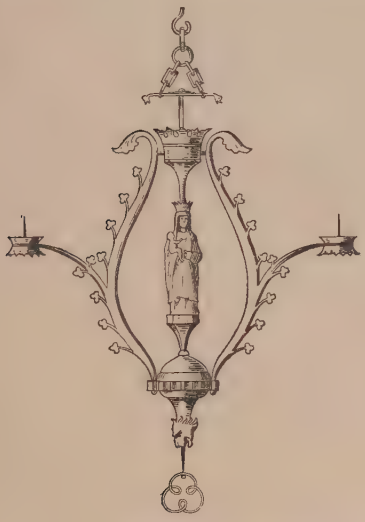


Fig. 140.—Chandelier at Oberkirchen.

Lastly, we may mention the *wall-lights*, which were mostly fastened on the piers and on the walls. They seldom occur, however, among the lights of the Middle Ages. Romanesque examples are in the church

at Fürsten near Munich; Gothic ones in St Cunibert at Cologne, in the Reinold church at Dortmund, and St Mary's there (Fig. 141). In the later time the staff,

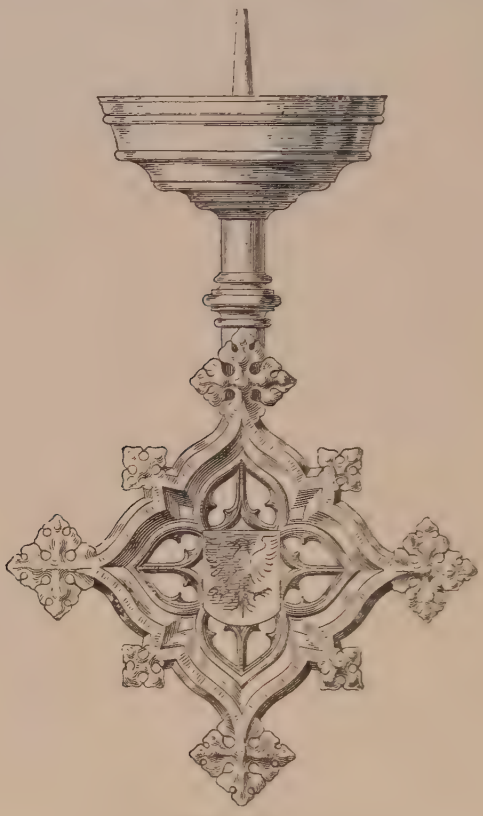


Fig. 141.—Wall-light from Dortmund.

which fastens the lustre to the wall, passes through a shield pierced with tracery-work, worked in elegant cast brass.

Quite a special kind of light is used for the worship of the dead, as in festive offices for the soul;

the raised catafalque in the middle of the nave of the church is surrounded by a number of candlesticks. Such candlesticks for the burial-service we see in St Gereon and St Columba at Cologne, as well as in the church at Neuss. The most magnificent work of this kind, but of which only fragments remain, and which Gailhabaud has made use of for restoration in his famous work, is the mortuary chapel in the church on the Nonnberg at Salzburg. This *chef-d'œuvre* of Gothic art in smith-work forms a chapel-shaped building, intended for the reception of a princely catafalque, furnished with about two hundred light-holders on the balustrades, the gable, the roof-ridge, and the pinnacles, all suitable to the Gothic style of form and material.

V.

FONTS, SPRINGS, AND MONUMENTS.

I. FONTS.

IN the first centuries of Christianity, peculiar buildings, (*baptisteries*), round or octagonal, were erected near to the principal churches for the performance of baptism; such a one still exists in the Constantinian baptistery of the Lateran at Rome, although it has been lately modified. The centre of this building received a deep basin (*piscina*), to which several steps descended, and in which the person to be baptized received his baptism standing, by dipping (*immersio*). In Italy, during the whole of the Middle Ages, they remained true to the use of these separate baptisteries. In Germany, originally, the bishops' churches, and also the abbey churches, had their baptistery. Still, these arrangements have mostly vanished, leaving no trace, or have been so completely transformed, that the original intention is only to be recognised by the present name of the patron of the church or chapel, John the Baptist. So are the John's churches or chapels near the cathedrals at Ratisbon, Augsburg, Strasburg, Spires,

Menz, Worms, and Maestricht; so also, near the minsters at Aix-la-Chapelle and at Essen, where the baptistery-chapels lie to the west of the principal church, with which each is connected by an atrium. A very old baptistery is still existing near the cathedral at Brixen; and one of the thirteenth century near St Gereon at Cologne.

In Germany, however, evidently in the ninth century, arose the custom of erecting a font of a suitable size (*fons baptismalis*) in the principal churches, and thus obviating the necessity of a special building. In the plan of St Gallen, which belongs to the beginning of the ninth century, the font is placed in the middle of the nave, close to the western choir, and to the east of it; it is dedicated to John. In this time also began the custom of introducing, instead of the old baptism by dipping (*immersio*), that by sprinkling (*infusio*), which is now generally used, and which has exercised a certain influence on the plan and erection of fonts. The usual place for the font is, as at the present day, at the western end of the north side aisle; it is only the Protestant worship which has generally removed the font from its old place, and placed it at the entrance of the choir.

In pictures of the ninth century the font occurs in the form of a barrel, in which the persons to be baptized stand up to their hips in water, while the priest, standing beside them, pours water on their heads. In the Romanesque times the fonts are, as a rule, simple stone

ones, which are still found in many churches of Germany. Mostly of a round shape, they form cylinders, the configuration of which reminds one still of barrels or vats; doubtless a reminiscence of those barrels in which baptism often took place, as, for example, in the year 1124 at Peyritz, where such barrels were sunk in the ground, in which seven thousand Pomeranians received baptism in a few days. Sometimes the handsome tubs of the Roman baths were used as fonts: an example of this is the font in Great St Martin at Cologne, according to an old tradition a present of Pope Leo III., of the beginning of the ninth century. The cylindrical fonts of the Romanesque period are often ornamented with blind arcades on little columns, or at least with a round-arched frieze, and sometimes, also, by floriated work, or with pictorial illustrations. The baptism of Christ in Jordan, other scenes from the life of the Redeemer, the Apostles, and the Evangelists, occur. These fonts often rest on forms of lions, as in the churches of Methelin and Brenken in Westphalia; sometimes such lions are brought in only at the feet, as in the church of St James at Koesfeld. The font in the church at Freckenhorst, of the year 1129, is distinguished by rich ornamentation in relief. The font in the church at Brechten, near Dortmund, is richer and more elegant, belonging to the transition style of the thirteenth century. Examples of the simplest Romanesque fonts are in St George's at Cologne, and in the church at Schwarz-Reindorf. The fonts of the Romanesque period generally rest on a single stand,

which is surrounded by columns, a form which often occurs on the Lower Rhine. Octagonal fonts are found, for example, in the cathedral at Limburg on the Lahn, in the cathedral at Merseburg, in the Madonna church at Friedberg.

In the Gothic period a complete transformation of fonts takes place, which not only includes the general form but also the pictorial decoration. The fonts become slimmer, and are more richly membered, and take the form of great goblets, which are polygonal (mostly octagonal), and mostly covered, on the foot as well as on the belly of the vessel, with Gothic tracery-work, and more rarely with figurative representations. Ornamented fonts of this kind are very numerous, as, for example, in St Paul's, St Peter's, St Thomas's, in the cathedral and in the Meadow church at Soest, in the Peter's church at Dortmund, the Ludger church at Münster, in the Nicolai church at Jüterbogk, &c. The fonts in the Catharine church at Osnabrück, in the minster at Herford, in the John's church at Billerbeck, of the year 1497, in the cathedral at Marienwerder, and the artistic and most beautiful of all in the church at Urach, made by Martin Christoph, were adorned with figurative ornaments. Not less handsome is the font in the church of Mary at Reutlingen, of the year 1499.

The *metal fonts*, which occur more rarely in the Romanesque period, but very frequently in the Gothic, have greater significance. They have the form of basins or cauldrons, which, as a rule, rest on figures of men, per-

sonifications of the four rivers of Paradise, or on lions. The wonderful basin, cast by Lambert Patras of Dinant, in St Bartholomew's at Liege, dates from the year 1112. It rests, according to the pattern of the famous brass basin of the Temple at Jerusalem, on twelve brazen balls, and is ornamented with five scenes in relief from the life of John the Baptist, and of the Evangelist. The font in the cathedral at Osnabrück, in the twelfth century, cast by Master Gerardus, rests on three feet, and shows, in relief, the baptism of Christ, and the apostle princes Peter and Paul. More important still is the font in the cathedral at Hildesheim, belonging to the late Romanesque epoch, a basin completely covered with sculpture, resting on the kneeling figures of the four rivers of Paradise, which is closed by a high lid quite as richly ornamented (Fig. 142). The font of the church at Berchtesgaden, which is claimed for early Romanesque, shows the rivers of Paradise. The font in the cathedral at Bremen, resting on four men borne by lions, belongs to the late Romanesque time. Of the same period is the font which is in the Godehard church at Brandenburg; and even in

Fig. 142.—Font in the Cathedral at Hildesheim.

the fourteenth century we find a Romanesque font in the cathedral at Salzburg of the year 1321. On the other hand, the interesting font in the cathedral at Wurzburg, of the year 1279, shows an early Gothic membering, with heavy supporting piers and little gables, ornamented with crockets. In it there are eight representations in relief from the life of Christ, in which the artist, a Master Eccardus, has introduced himself.

In the Gothic period, the architectonic forms were brought out strongly in the membering, although in single cases, as in the font of St Mary's at Angermünde, of the fourteenth century, the old division and arrangement is retained, in that the belly of the vessel is ornamented with blind arcades and figures, and that it is supported by three figures of men. Thus also is it with the beautiful font in the cathedral at Lübeck, which was cast in 1455 by Laurence Groven; it rests on three kneeling angels, and is ornamented with figures in relief of Christ, of Mary, and of the Apostles. Also with the somewhat rougher but richer font of the Mary's Church there, of the year 1337, which is supported by angels. The same form is again more finely developed in the James church, 1466. The fonts were generally formed of cast brass, worked by hand, and furnished with supporting piers and the other architectural forms of the Gothic style; as, for instance, the one in the town church at Wittenberg, cast in 1457 by Master Hermann Vischer, the father of Peter Vischer of Nuremberg. Then the lids were often developed into high pierced turreted tabernacles, as on the

font, of the year 1440, in St Catharine's at Brandenburg (Fig. 143). A contrivance like a crane, as we see it in St Columba's at Cologne, and in the Madonna church at Hal in Belgium, serves for the raising of the heavy lid. We find other metal fonts of the Gothic time in the Church of the Cross at Hanover (supported by three figures of men, and adorned with statuettes), and in the Ægidius church (a decagon, also with sculpture, resting on small lions).

With many of the later fonts a railing has been erected at a proper distance as a termination to the space, so that, as it were, a separated baptistery has arisen in the church. A handsome brass railing, of the beginning of the sixteenth century, surrounds the font in the Mary's church at Lübeck; a renaissance railing of rich bronze-work is found in the St James' church there; a railing of wrought-iron, also in the forms of the renaissance, is in the collegiate church at Luzern. Lastly, it may be mentioned that sometimes heating apparatuses are found under the fonts, for the purpose of warming the water, as in St Sebald's in Nuremberg, one of the Gothic fonts of the fourteenth century.

2. WELLS.

It often occurs that natural springs issue forth in churches, especially in their crypts. The crypts of St Peter in the Vatican, St Ponziano, and St Alessandro, had such flowing springs. In the crypt of the Church of Peter and Paul at Gorlitz is a well; in that of the

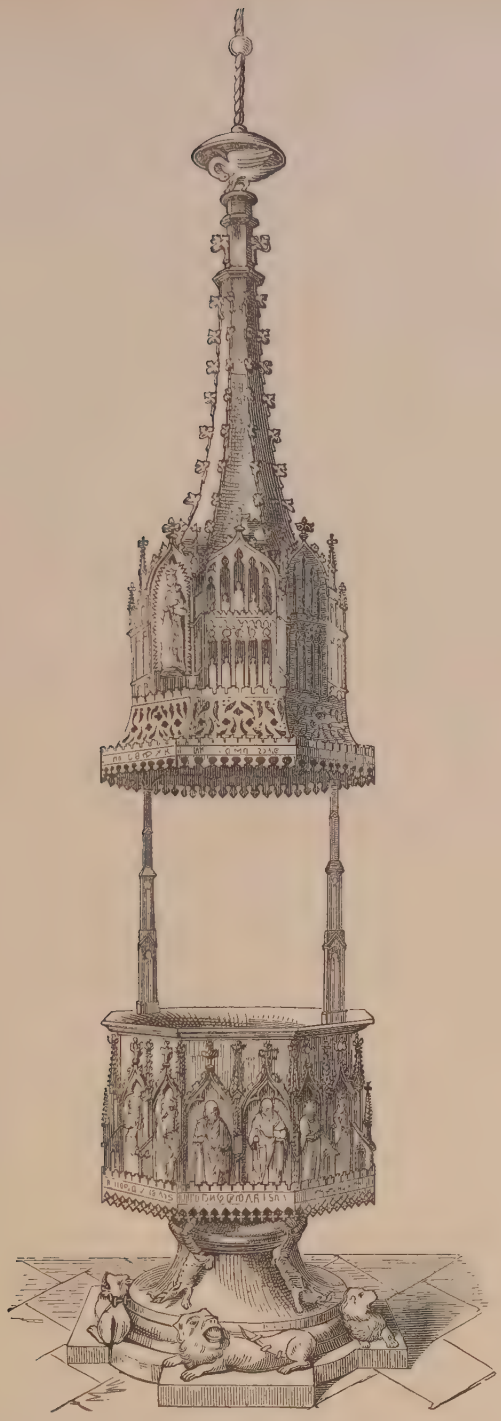


FIG. 143. Font in the Church of St Catharine at Brandenburg. *See page* 190.

cathedral at Paderborn issues an arm of the Pader river; and to the Kilian-spring, in the crypt of the new minster church at Würzburg, is ascribed the power of working miracles. Besides, wells were often placed, in the Middle Ages, in churches, in order to obtain, in a consecrated

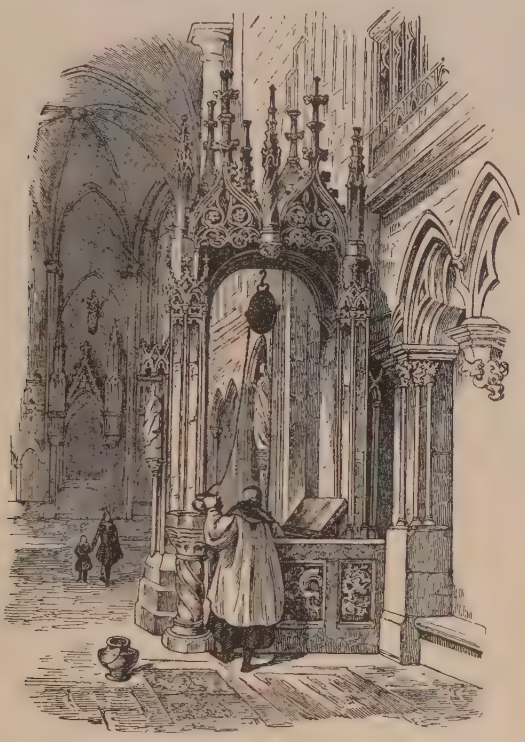


Fig. 144.—Well in the Cathedral at Ratisbon.

place, the water necessary for the uses of divine worship. Such wells have, above their enclosure, a stone canopy, to which is attached a pulley, for the purpose of letting down and raising up the bucket. Such a well, in the cathedral at Ratisbon (Fig. 144), is ornamented in a

judicious manner with the figures of Christ and the Samaritan. Another, executed in elegant Gothic forms, is found in the minster at Strasburg; a third, of the year 1511, at the minster of Freiburg in Breisgau.

3. Monuments.

As it was the original destination of churches to be the sepulchres of the saints, it was at first a firmly-established principle to allow no other persons to be buried in the consecrated place. But the longing of the faithful to have their resting-place in a spot especially hallowed in the neighbourhood of the martyrs, or under the protection, as it were, of their relics, soon, as it appears, broke through this rule, and even in the beginning of the Romanesque epoch numerous examples occur to show that it had become a general custom to bury in God's house illustrious persons who had deserved well of the church. Bishops and abbots, princes, and especially the founders of pious institutions, received their grave in the churches, a great number of which were founded for the express purpose that the founders might find in them their grave. Thus, only to name a few examples, Charlemagne received a vault in his minster at Aix-la-Chapelle; Conrad II. founded the cathedral at Spires; Henry the Lion, the cathedral at Brunswick; Lotharius of Süpplingenburg, the church at Königslutter, to be sepulchres for themselves. It was principally the crypts which served for this purpose, but sometimes other parts of the church; even in the high choir we find,

in the early Romanesque period, tombs of founders, bishops, and princes. Thus also were the chapter-houses and cloisters of monasteries used for burial, and sometimes we find in the larger cathedral churches, as at Bamberg and at Würzburg, special burial-places built. So far did the longing to rest in consecrated earth go, that the citizens of Pisa, when they made their *Campo Santo*, fetched, according to tradition, the earth from the Holy Land, in order to bury their dead in it.

When graves had once been allowed in the churches, it was necessary to show their place by some outward sign. This was immediately done by *stone slabs*, which were inserted in the pavement of the church as a covering to the grave. The oldest slabs of this kind have often only flat ornaments, as the marvellous tomb-stone in the Church of the Capitol in Cologne. This tomb-stone is further worthy of notice, in that it is broader at the head, like our present coffins. Sometimes among the ornaments occurs the sign of a cross or of a crozier. Thus in forming these graves they did not follow the ancient Christian custom of placing the dead in sarcophagi ornamented in relief, but imitated the old German custom of burying in the bosom of the earth. Sometimes we find on the oldest tomb-stones an inscription which announces the name and the date of death of the deceased, as on the grave-stones discovered in the crypt of the minster at Bonn. Gradually, in the increasing progress of art, they sought to retain on the grave-stone the representation of the deceased, which at first was limited to a simple sketch

of the general outlines, and only in the course of the fourteenth century was developed into a real portrait delineation. But as the grave-stones formed an integral part of the pavement, engraved representations alone could be used, the lines of which were filled in with a dark cement. The inscription formed the enclosing border; it contained, besides a sufficient notice of the life, a pious wish, generally the *requiescat in pace*. The inscriptions in the early Romanesque times are in Roman initials; in the later Romanesque, in modified Gothic capitals, which were used until the fourteenth century; and from that date, in the Gothic small letters, which, on account of the many abbreviations, it is difficult to read. Examples of such simple grave-stones, with engraved representations, are found even as late as the fourteenth century; as, for example, in the cathedral at Havelberg, the church at Nossendorf (Fig. 145), and in other places. In time the

Fig. 145.—Tombstone from the Church at Nossendorf.

grave-stones became larger, and at the same time richer in design; the representation of the dead was raised in powerful relief, and with a closer resemblance to the life; in a quiet attitude, the hands mostly folded in prayer; often married people beside one another, the man resting with his feet on a lion as the emblem of strength, the woman with hers on a dog, the emblem of fidelity; and if bishops or other high prelates were represented, two flying angels supporting a mitre were introduced. Besides, the Gothic period here strives also for architectonic borderings, while a canopy is often introduced. Examples of such slabs in relief occur in the fourteenth, and up to the sixteenth century, in cathedrals as well as in cloister and parish churches.

Not less often do we find such grave-slabs *placed erect*, as *epitaphs*, on the piers and walls of churches; and after the slabs in relief came into general use, this kind of monument must have recommended itself on practical grounds (Fig. 146). It is, indeed, on these standing grave-slabs that art has shown its progress most brilliantly, and has given them great value by larger extension and architectonic treatment. The cathedrals at Würzburg, Menz, and Bamberg contain a great number of such monuments, on which may be observed the development of idea and of execution from the thirteenth to the sixteenth century. A large general monument of this kind, which represents eight knights and six ladies of the race of the Counts of Neuenburg in Switzerland, under a Gothic canopy, is seen in the collegiate church there.

Fig. 146.—Monumental Slab of Günther of Schwarzburg in the Cathedral at Frankfort-on-Maine

Another form of monument arises if the dead person is placed, not under, but above the earth, and the sarcophagus rises as a rectangular *tumba*, either in the middle of the choir, and in the nave of the church, or placed against a wall. In the latter case, a niche was introduced with architectonic bordering, or with a canopied top. Wall-tombs did not come into such general use nor attain such artistic value here as in Italy. Such tombs are, as a rule, covered with a picture in relief of the dead person, and have on their side surfaces architectonic ornaments only; in the Romanesque and early Gothic period, column-arcades, but later, the usual Gothic tracery-work. On the marble tomb of Bishop Suitger of Meyendorf, afterward Pope Clement II., in the cathedral at Bamberg, a work of the thirteenth century, are executed figurative reliefs of symbolical and allegorical subjects. The tomb of Henry the Lion and his wife, Mathilda, in the cathedral at Brunswick, is a conspicuous monument of the late Romanesque period. The Duke, according to a custom generally followed in the Middle Ages, holds in his hand a small model of the church founded by him. On the grave-stone of the Saxon Duke Wittekind, in the church at Enger, the figure is of the late Romanesque period; the tomb, on the other hand, is of a later date. The monument of Duke Henry II., who fell in the Mongolian battle of Liegnitz, A.D. 1241, in the Vincenz church at Breslau, comes down from the late Gothic period. We find a large number of such tombs in the northern side-aisle of the cathedral at Basle.

and some considerably important ones in the cathedral at Cologne, among them that of the Archbishop Engelbert of the Mark, whose tomb is ornamented with statuettes in handsome Gothic niches. Still in the manner of the Middle Ages, although with a more developed natural feeling, is the grave of Henry II. and his wife, in the cathedral at Bamberg, which Tillman Riemenschneider, the girdler of Würzburg, executed from 1499 to 1513. The tomb is ornamented with scenes from the life of the Emperor, and above it are the beautiful statues of Henry and his wife. Of similar richness, although of less artistic value, is the grave of Frederick III., executed by Michael Dichter, in St Stephen's at Vienna, completed in 1513.

Along with the stone slabs, the more costly material of *bronze* or of *brass*, with representations engraved and in relief, comes into use from the early Romanesque epoch. In the Romanesque period, preference seems to have been given to the relief. Thus we see on the tomb of the anti-emperor Rudolph of Swabia († 1080), in the cathedral of Merseburg, the figure of the deceased in extremely primitive and stiff *basso-relievo*. There is also the ruder bronze figure of the Archbishop Adalbert († 981), in the cathedral of Magdeburg; and in the same place, the somewhat more developed grave of the Archbishop Frederick II.

In the Gothic epoch *engraved* representations are preferred, and a high artistic value was given to them by their considerable extent and by their brilliant

architectonic treatment. Such a slab, of the thirteenth century, is to be seen isolated in the St Andrew's church at Verden, on the tomb of Bishop Yso († 1231). They appear especially numerous in North Germany during the fourteenth century. They give the picture of the deceased in bold outlines, bordered by Gothic architecture, which exhibits, in numerous niches, the apostles and other figures of saints, and in the upper border, under canopies, Christ or the Madonna, between angels playing music. Angels, also, generally hold the pillow of the deceased, and other representations are seen at the foot, while the rest of the surfaces are covered with tapestry patterns, and a beautifully-modelled inscription forms the outer border. Thus, these large slabs are the most beautiful works that the German Middle Ages have produced in the way of monuments. We find monuments of this kind still in the Nicolai church at Stralsund, of the year 1357; three episcopal slabs in the cathedral at Paderborn; a double slab in the cathedral at Lübeck; others in the cloister church at Altenberg, in the John's church at Thorn; two of the handsomest double slabs in the cathedral at Schwerin; a fine double slab, of the year 1387, in the cathedral at Bruges (Fig. 147); and a late double slab of 1521 in the Mary's church at Lübeck; several in the burial-place of the cathedral at Bamberg; and lastly, a whole row of graves of prebendaries, of the fifteenth and of the beginning of the sixteenth century, in the cathedral at Erfurt, where, in a number of the plainest, the head only is introduced,

the chalice (the attribute of a priest), the arms, and sometimes also the inscription on the metal of the stone slab.

Towards the end of the Mediæval epoch, in the

Fig. 147—Monumental Slab in Bruges.

metal tombs the treatment in relief is preferred, as is shown in numerous monuments in the cathedral and in the burial-place at Bamberg. From the fourteenth cen-

tury, there is in this style the monument of the Archbishop Conrad of Hochstaden († 1261), in the cathedral of Cologne, a work of the highest artistic value. And then, at the end of the Middle Ages, combining the richness of form of Gothic art with the life of modern times, there is that most noble of all the German bronze tombs, Peter Vischer's monument of the Archbishop Ernest, in the cathedral at Magdeburg, of the year 1395, with the fine bronze statue of the deceased, under a Gothic canopy, and with the figures of the apostles, and coat of arms beautifully executed on the sides of the tomb. This same Middle Age idea produced, at the beginning of the sixteenth century, the most comprehensive and the most costly monument of Germany, namely, the tomb of the Emperor Maximilian, in the court church at Innsbruck, the execution of which was, however, carried out more in the spirit of modern times. It is also distinguished by being a *cenotaph*—that is, it does not contain the body of the deceased.

VI.

SCREENS, PULPITS, AND ORGANS.

1. CHOIR-RAILINGS AND SCREENS.

IN the ancient Christian basilicas, the presbyterium was separated from the other parts of the church by stone balustrades, which went round it. Connected with these balustrades was, on each side, a raised tribune, the *ambon*, approached by several steps, for the reading of the Epistle and Gospel. In the Middle Ages the choir-balustrades in bishops' and cloister churches were retained, in order to separate the space appointed for the clergy from that allotted to the congregation; but the ambons were omitted, because it became the custom to read the Gospel and the Epistle from a gallery, which was built on the western transept-side of the choir-balustrades, and from this use received the name *lectorium*, in German *lettner*.* These screens, often ornamented with statues, and in Gothic times with architectural forms, go along the whole breadth of the nave as handsome arcades. The entrance to the high choir is

* With us the name of rood-screen, or rood-loft, from its being surmounted by the Holy Cross.—*T.*

effected by two openings, which are fitted with curtains; and between them is erected the altar appointed for divine service for the laity. From the choir a spiral staircase leads up to the top of the screen. When it became the custom to read the Epistle and Gospel at the altar, the screens were erected as a singers' choir, and sometimes received a small organ.

The Church of St Michael at Hildesheim, the Madonna church at Halberstadt, the cloister church at Hamersleben, but pre-eminently in a brilliant manner, the cathedral at Bamberg, furnish examples of the rich decoration which the choir-balustrades received in the Romanesque period, especially by the introduction of the statues of Christ, the Madonna, and the apostles. A handsome bronze railing of the Gothic style, and connected with carved works and alti-relievi in stone, of the year 1518, surrounds, in its complete extent, the choir of the Church of Mary at Lübeck. The cloister church at Maulbronn, and the church Notre Dame de Valère at Sitten in Wallis, possess screens of the late Romanesque period, as does also the cathedral at Naumburg in front of its eastern choir, while the western choir of the same church has an early Gothic screen. The screen of the minster at Basle, which is now turned to the use of the organ on the western end of the nave, originated in the fourteenth century. The fifteenth century screen in the cathedral at Havelberg is distinguished for its reliefs. On the other hand, the architectonic decoration preponderates in the handsome screens (also late Gothic) of the

cathedral at Halberstadt and at Münster. We subjoin, in illustration, a French work, out of the Magdalene church at Troyes, as plate Fig. 148.

2. AMBONS AND PULPITS.

In the early Christian times, it was the custom for the bishop to preach from his raised *cathedra;* but, on account of its great distance, as the place of the bishop was at the background of the altar-niche, even Chrysostom and also Augustine made use of the ambon, which was nearer to the congregation. Such ambons we still see in many churches of Italy, among which the cathedral at Ravenna possesses the oldest, of the sixth century. In the building-plan of St Gallen there is a round ambon marked on the eastern end of the nave, in the middle of it. An ambon of the eleventh century, perfectly preserved, and ornamented with great splendour, is found, as a gift of the Emperor Henry II., in the minster at Aix-la-Chapelle. It is of the trefoil plan, executed in wood, covered with gilt copper, and adorned with jewels, enamels, and ivory reliefs, in fifteen richly-bordered panels (Fig. 149).

Out of the ambon was developed, in the thirteenth century, the pulpit, and the name, *kanzel*, is retained in Germany as the reminiscence of the choir-balustrade, *cancelli*. During the predominance of the Romanesque style, the pulpit was formed as a structure of stone, which, as it seems, stood in connexion with the screen, or else leant against a pier of the nave. A parapet,

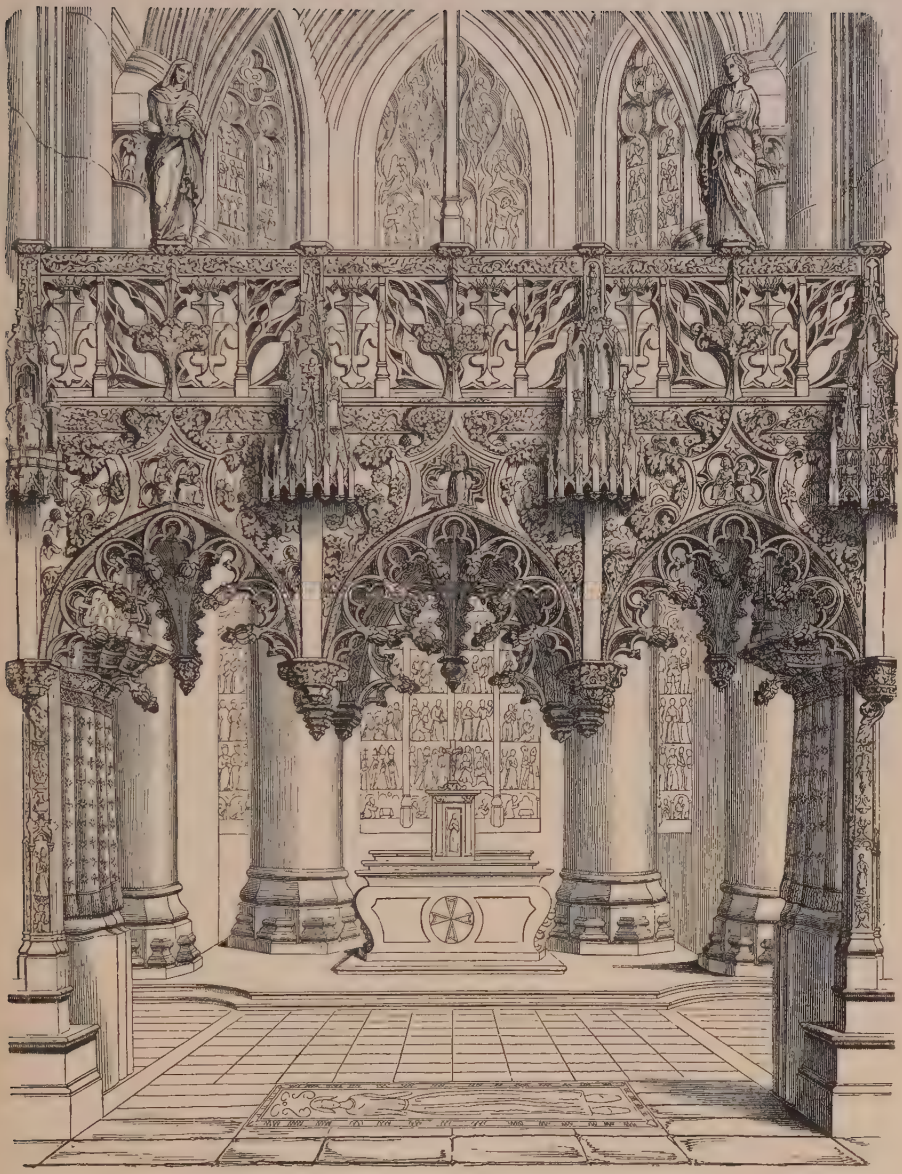


FIG. 148. Screen of the Magdalene Church at Troyes. *See page* 204.

sometimes ornamented in relief, terminates it; a stone step led down from it behind. In the St Peter's church at Soest, and in the church at Brenken, in Westphalia, the pulpit-step is brought against the southern pier of

Fig. 149.—Ambon from the Minster at Aix-la-Chapelle.

the transept. The most beautiful pulpit in Germany is that in the church at Wechselburg (Fig 150), on which are represented the enthroned Redeemer between Mary, John, and the symbols of the Evangelists, as well as

Moses with the brazen serpent, Cain and Abel with their sacrifices, and Abraham's offering. A similar pulpit stands in the Neuwerks church at Goslar. While

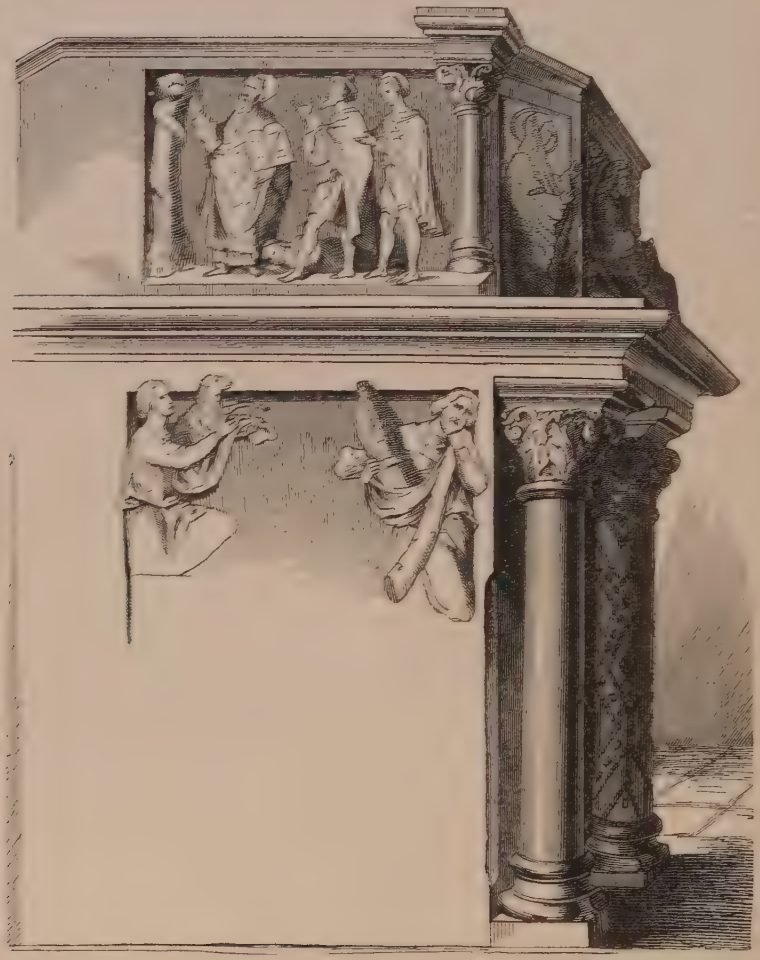


Fig. 150.—Pulpit at Wechselburg.

in Italy the pulpits retained the form of isolated structures resting on columns, and adorned with all imaginable

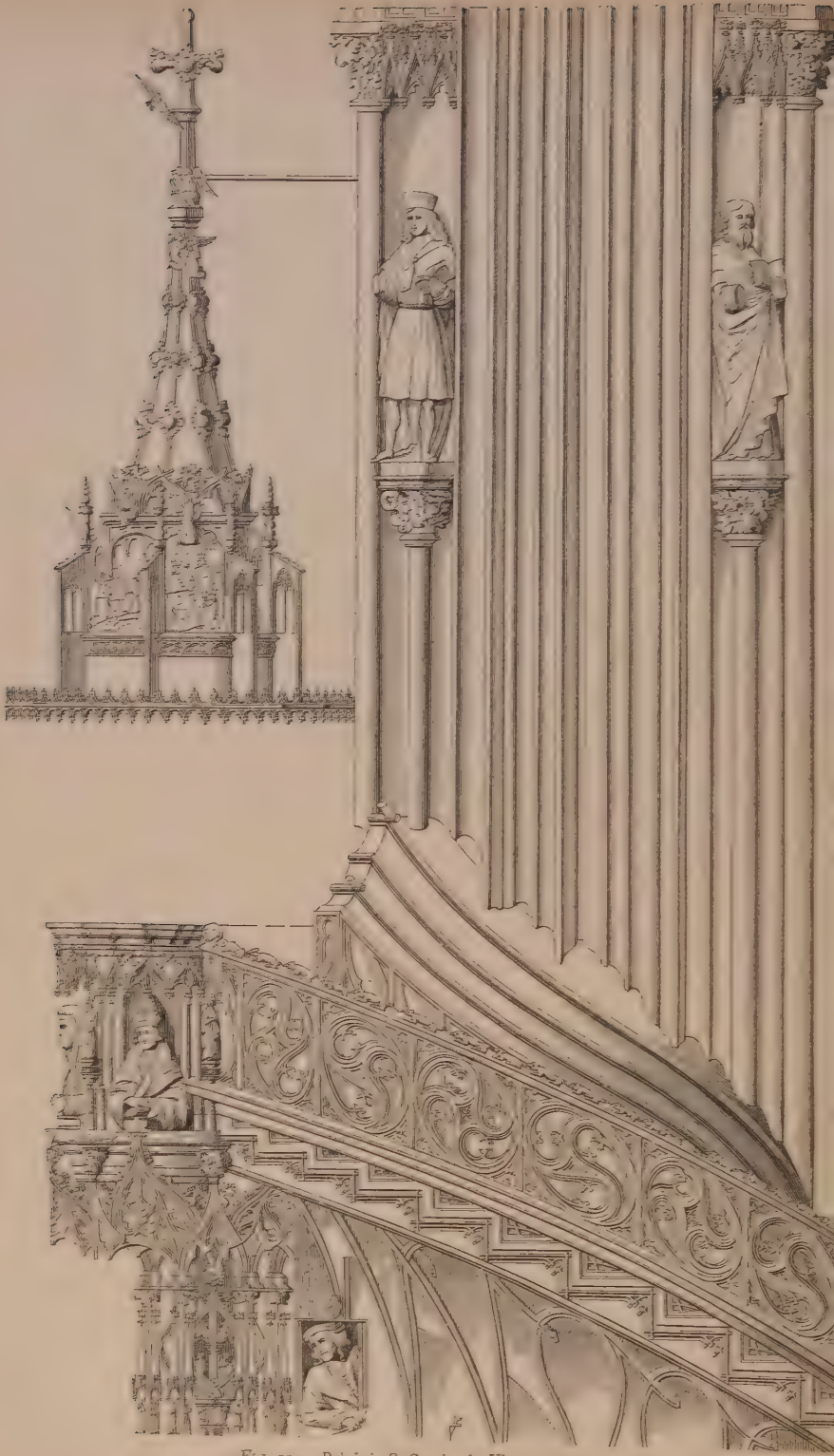


Fig. 151. Pulpit in St Stephen's, Vienna. *See page 207.*

pomp and splendour of material, and of the noblest artistic perfection, in Germany the pulpit was generally on a single column, or a bracket, placed against a pier of the nave, and received the form of a cup, and became the favourite spot for the sculptors to cover with tracery and pictures in relief. As a rule, the four Evangelists, or the four Church-fathers, were introduced on the parapet under canopies; but other representations, particularly out of the life of the Saviour, occur. In order that the sound might be well thrown out and spread, sounding-boards were introduced over the pulpits, which, carved of wood, represented pierced pyramids or canopies. The most important pulpits of the late Gothic time are seen in St Stephen's at Vienna, of the year 1430 (Fig. 151), in the collegiate churches at Stuttgart and at Herrenberg, in the minster at Ulm, in the cathedral at Freiberg in the Harz Mountains, and in the minsters at Strasburg, Freiburg in the Breisgau, and at Basle. Sometimes pulpits occur on the exteriors of churches, which were reached by a step from the church. There are examples of this in the Pilgrimage church at Creglingen, and in the St Stephen's church in Vienna.

Fig. 152.—Reading-desk at Aix-la-Chapelle.

The reading-desks connected with the screens in the Gothic time often receive a very tasteful form, and, as a rule, are formed of cast-bronze. A three-sided stand, surrounded with pierced supporting arches and piers, bears the symbol of the Evangelist St John, an eagle, which, on its back and extended wings, offers a place on which to lay the book. The Reinoldi church and the Mary's church at Dortmund, the minster of Aix-la-Chapelle (Fig. 152), and other churches, possess, even now, such reading-desks. A beautiful reading-desk of a similar kind is in the minster of Bern, which came from the cathedral of Lausanne. A Romanesque praying-desk of sandstone, resting on four columns, is seen in the chapel by the side of the chapter-house of the cloister of Comburg, near Hall in Swabia. Singing-desks of the Gothic period, erected in the middle of the choir, were carved of wood, and are still often found in old churches. The collection of the Antiquarian Society at Ulm possesses one treated in an especially artistical manner. It was executed in 1458 by Jörg Syrlin the elder.

3. ORGANS.

Organs occur in German churches from the very earliest portion of the Middle Ages. An organ appeared at the court of Pepin, as a present from the Byzantine Emperor. Charlemagne, after that, had an organ built for his minster at Aix-la-Chapelle, and this was the first time that this instrument, constructed originally for secular purposes, was brought properly into use in the church.

From the tenth century organs were everywhere introduced into bishops' and cloister churches, and from the thirteenth century downwards we find in the more important churches two organs,—a smaller one in the choir, to accompany the chaunting of the priest, and a larger one at the end of the nave, on a gallery over the western entrance. Thus does the younger Titurel describe the organs in the temple of the Sant Graal. But they also occur in old churches on one side of the nave over the

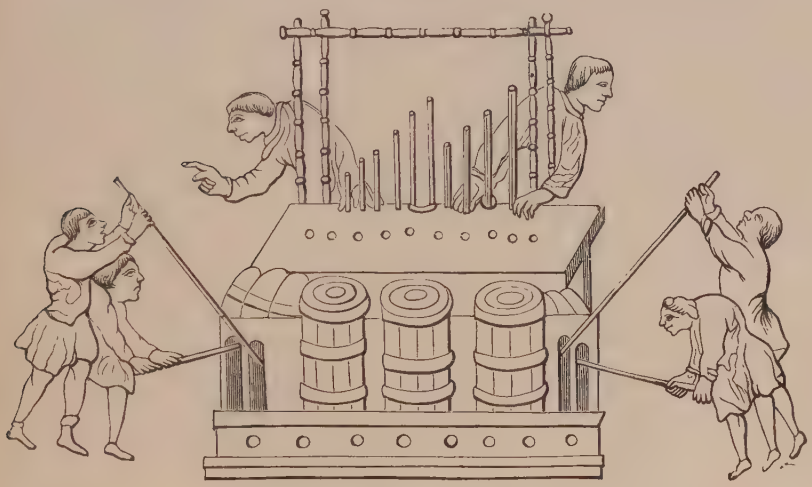


Fig. 153.—Organ of the Twelfth Century.

arcades, as does the interesting organ, of the fifteenth century, in the church of Mary at Dortmund; and in the minster at Strasburg. The organs for a long time were very simple, and the keys were so heavy and broad that they could only be pressed down by the elbow or the complete fist. An exceedingly primitive organ of the twelfth century is represented in the Psalter of Edwin,

in the Cambridge Library (Fig. 153). The Middle Age organs still in existence all belong to the end of the fifteenth and beginning of the sixteenth century. The organ-case, symmetrically grouped, and, as a rule,

Fig. 154.—Organ from the Church at Alcala de Henares in Spain.

flanked by higher parts like towers, has, besides the customary tracery decorations, rich floral ornaments. Besides the examples already named in Dortmund and Strasburg, there are Mediæval organs in St Stephen's

at Vienna, in the collegiate church at Bützow, in St James's at Lubeck (a great work of the year 1504), and two in the Mary's church there, one of which is a very powerful one, above seventy-two feet high, of the year 1518. A well-arranged Gothic organ, of simple forms and powerful membering, is in the church at Alcala de Henares in Spain (Fig. 154). Often the doors, which were put on as a completion to the work, received artistic decoration by painting, as for example the organ-doors, painted by Holbein, of the cathedral at Basle, now in the museum there.

VII.

STALLS AND SHRINES.

1. STALLS, CHOIR-STALLS.

THE seat of the priesthood in the ancient Christian Church was in the depth of the apse, so that the altar separated them from the congregation. Against the wall of the apse, in the middle, raised by steps, is the throne of the bishop, and on both sides are situated in a semicircle the seats of the other clergy. This arrangement has been retained until now in several Romanesque basilicas; namely, in St Clemente and St Lorenzo, and also in the cathedrals of Torcello, Grado, and Parenzo in Istria. The seats were made of stone, generally of marble, and lined with pillows for the seat, and tapestry for the back. But even in the early part of the Middle Ages a thorough change took place in this arrangement. In the building plan of St Gallen (about 820), the apse is free from seats; however, there are benches, called *formulæ*, arranged across the church in the transept, one in the arch of the side arms, and two in two rows in the centre space. As this plan was

designed as a pattern, we may perhaps suppose that it represented the arrangement then in use. However, it is no longer visible in any church, for, with the removal of the high altar into the apse, there soon appears to have been introduced that arrangement of seats which since then has remained the predominant one. In fact we see, that, since the end of the Romanesque period, and perhaps before that time, the choir-stalls have been arranged in the length of the church on both sides of the choir, in from two to four rows, against the choir-balustrades. Sometimes the arrangement extends beyond the choir, even over the intersection of the transept; sometimes it is confined to the latter. The abbot, with one half of the monks, took the southern side (*chorus abbatis*, *latus præpositi*); the prior, with the other half, the northern (*chorus prioris*, *latus decani*). Each row is raised by steps above the one in front, and has its prayer-desk on the back of it, while the prayer-desk of the front row forms the front; the backs of the back row, with their high canopied top against the wall, form the termination of the whole. In certain places the rows are broken for the sake of more convenient passage. The arrangement of the choir-stalls is carried out with such especial attention to their purpose, that they attain to refined comfort. Besides the prayer-desk and the hassock, care is manifestly taken for comfortable sitting and convenient standing. The seats are arranged for folding up and down, and the sides of each seat have an upper and a lower arm, so as

to support the arms in standing as well as in sitting. But as the conventuals might become weaker from the long standing without being allowed to use the supporting arms in the church, a bracket, the so-called *misericordia*, was introduced on the under side of the seat, which, when the seat folded down, served for a support. Besides, there was no want of carpet for the feet, nor of pillows and tapestry for the back (*dorsalia*), the latter often in rich pictorial splendour, as in the cathedral of Cologne, at Halberstadt, and in the collegiate church at Quedlinburg.

In these few words we have described the exterior framework of the choir-stalls of the Middle Ages, on which, from the thirteenth to the sixteenth century, German carpenters and wood-carvers have shown their most brilliant work. Not only does the pure architectonic receive a membering and ornamentation corresponding to the architecture of the time, but wood-carving unfolds in exuberant richness its boldest, most graceful, and most luxuriant blossoms. The whole of the Old and New Testament, often in parallels rich in connexion, is united with the domain of Christian symbolism; and lastly, a crowd of roughly comical and satirical representations are taken from the fables of animals, and from the wide realm of the lower spheres of life, to which even the antique has had to contribute its offering from its fabulous world of nixes and sirens, centaurs and similar monsters. In scarcely any other position in Mediæval art does the circle of ideas of that time spread

out so completely before our eyes in its full extent. The single parts of the stall were especially suitable for the various representations depicted on them. Larger designs in relief are found on the front balustrade as well as on the high back-wall. The lofty sides and the tops offer spaces for special *chefs-d'œuvre;* the fantastic humour, with its coarse *eulenspiegel* jokes, which did not disdain the obscene, and dared to hurl the scourge of satire on the monks in consecrated places, is shown on the *misericordia*, which certainly, by its position, can have little pretension to receive noble works of sculpture. Lastly, a sparsely-used gilding or coloured inlaid-work is often associated with it, by which the effect which is produced by painting adds to the whole a new charm.

Of the extraordinarily large number of still existing choir-stalls we can only name three of the most important. The oldest are those, preserved only in fragments, in the cathedral at Ratzeburg, executed in the forms of the Romanesque style, and of such a very heavy massive form that they seem to consist of stone blocks, not of wood (Fig. 155). The choir-stalls of the cloister church at Loccum, originated about the year 1250, still show in their form and Romanesque floriated work reminiscences, if not so decided, of the stone style. Somewhat later and freer, but also principally in Romanesque forms, are the choir-stalls of the collegiate church at Xanten. The choir-stalls in the cloister church at Kappel, in the canton of Zurich, and the simple and interesting stall in the chapel of the Castle

of Chillon on the Lake of Geneva, bear the early Gothic character, though still with traces of the Romanesque period. Remains of a similar stall are in the cloister church at Ivenack in Mecklenburg.

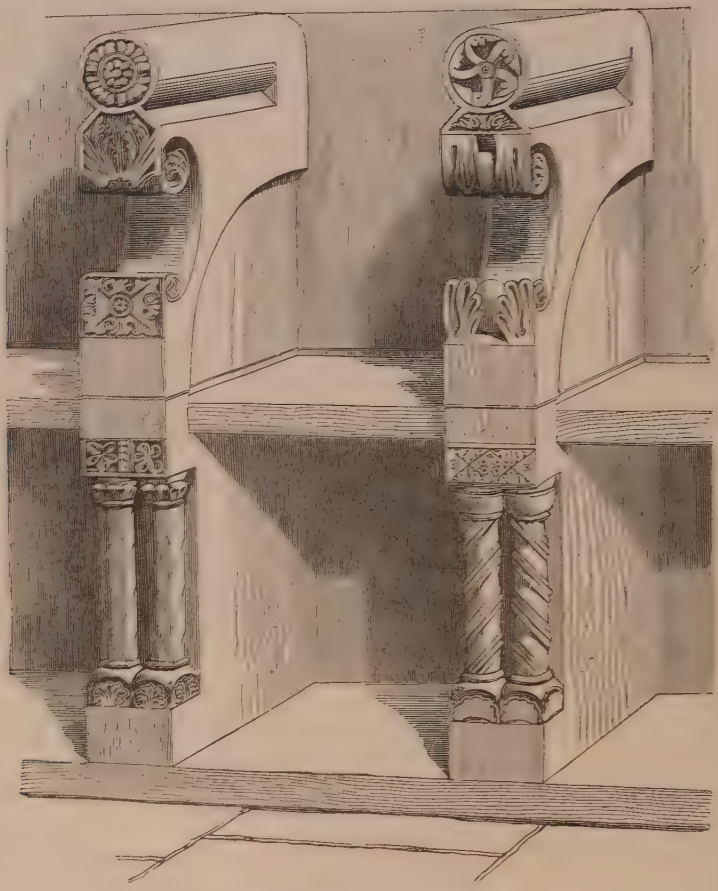


Fig. 155.—Choir-Stall from Ratzeburg.

In the sixteenth century, the peculiar character of carving in the choir-stalls was brought to a thorough

perfection, and with fresh energy architectonically and pictorially decorated. The choir-stalls in the cathedral at Fritzlar are still not quite free from reminiscences of

Fig. 156.—Choir-Stall in Eimbeck.

stone-work and of Romanesque forms. On the other hand, those of the year 1322, in the collegiate church at

Eimbeck, are beautifully finished; their adornment is effected exclusively by foliage treated in a masterly manner, with some fantastic figures and human heads (Fig. 156). In the full richness of pictorial and floral decoration stand the choir-stalls in the cathedral at Cologne, of the same period. To the second half of the fourteenth century belong the choir-stalls in the cathedral at Frankfort-on-Maine (A.D. 1352), the beautiful ones, executed in the spirit of the early Gothic, of the cathedral at Erfurt, as well as in the St Stephen's church at Constanz, and the elegant work in the collegiate church at Oberwesel, in the church at Boppart, and in the cloister church at Doberan (A.D. 1368).

In the fifteenth century, all the luxuriance of decorative architecture, and of the free sculpture of the time, is displayed on the choir-stalls. Swabia possesses the most beautiful, in the minster at Ulm (Fig. 157), executed by Jörg Syrlin, 1469–1474, in the church at Memmingen, in the cathedral at Augsburg, the church at Ueberlingen, the cathedral at Constanz (A.D. 1467), the hospital church at Stuttgart, and in the cloister church at Maulbronn. In the rest of Germany, the Lower Rhenish Westphalian region is exceedingly rich in such works. There are particularly early and rich ones in the cloister church at Kappenberg; later ones in the Martin's church at Emmerich, the parish church at Kempen, the cloister church at Cleve, and in the church at Calcar. In the other parts of Germany, the most beautiful ones are those in the Barbara church at Kuttenberg, and in St Stephen's at Vienna, the latter executed in 1484 by

Fig. 157.—Choir-Stall in Ulm.

Fig. 128.—Choir-Stall in Altenberg.

William Rollinger. To the same epoch belong the choir-stalls of the church at Altenberg (Fig. 158). To the sixteenth century belong the choir-stalls of the Mary church at Dortmund, the Greyfriars' church at Danzig, the church at Halle, the collegiate church at Herrenberg, and the minster at Berne.

Besides the choir-stalls, there are often found near the altar three seats connected together, for the deacons or priests assisting at the altar, thence called *Levite seats* (sedilia). They were originally stone benches, introduced in simple or ornamental wall-niches. An elegant example of this, with statuettes of the Madonna, of the apostle princes, and of the foundation saints, under canopies, is in the Lambert church at Coesfeld; a similar one in the parish church at Borken; simpler ones in the two churches at Iserlohn. We find Levite seats, carved in wood, in the cloister church at Doberan and at Maulbronn; also in St Catharine's church at Lübeck, where also is introduced, at the back, a singing-desk. There also occur richer praying-stalls, for illustrious and other distinguished persons; thus, the marble seat of Charlemagne in the minster at Aix-la-Chapelle, and the praying-stall of Count Eberhard of the beard (A.D. 1472) in the choir of the church at Urach, with a representation of Noah asleep and his sons.

2. SHRINES.

Among the shrines of Mediæval churches the *sacrament-shrines* and the *tabernacles* stand out chief

in liturgical and artistic importance. They are always placed on the Gospel-side of the altar, and thus against the northern wall of the choir. Their origin dates from the time that the keeping of the consecrated host above the altar (the *suspensio*) went out of use; therefore we do not find them in countries like France, where for a longer time the *suspensio* was retained. The sacrament-houses, as they are called by the people, are stone shrines, either placed against a wall or isolated, or real wall-cupboards, in which it was customary to keep the pyx with the Eucharist. The shrine itself is closed by a pierced iron grating (Fig. 159). Where the tabernacles rose as isolated structures before the wall, they mostly imitated a Gothic pyramidal tower, the supporting system of which, with its window-work and pinnacles, are represented in miniature often marvellously fine. Statuary decoration, particularly scenes from the Passion of Christ, are often placed on the canopies. The foot of these handsome works often rests on reclining lions, sometimes on squatting figures of men. Such shrines are found throughout Germany, but especially in Swabia, Franconia, Westphalia, and on the Lower Rhine. One, treated in the transition style, is in the village of Steinbach in Thuringen; one, still simpler, in the church at Kappenberg. The remainder, and particularly the most beautiful, belong to the end of the fifteenth and to the beginning of the sixteenth century. Examples are in the Roman Catholic church at Dortmund, and in the Reinoldi church there, in the

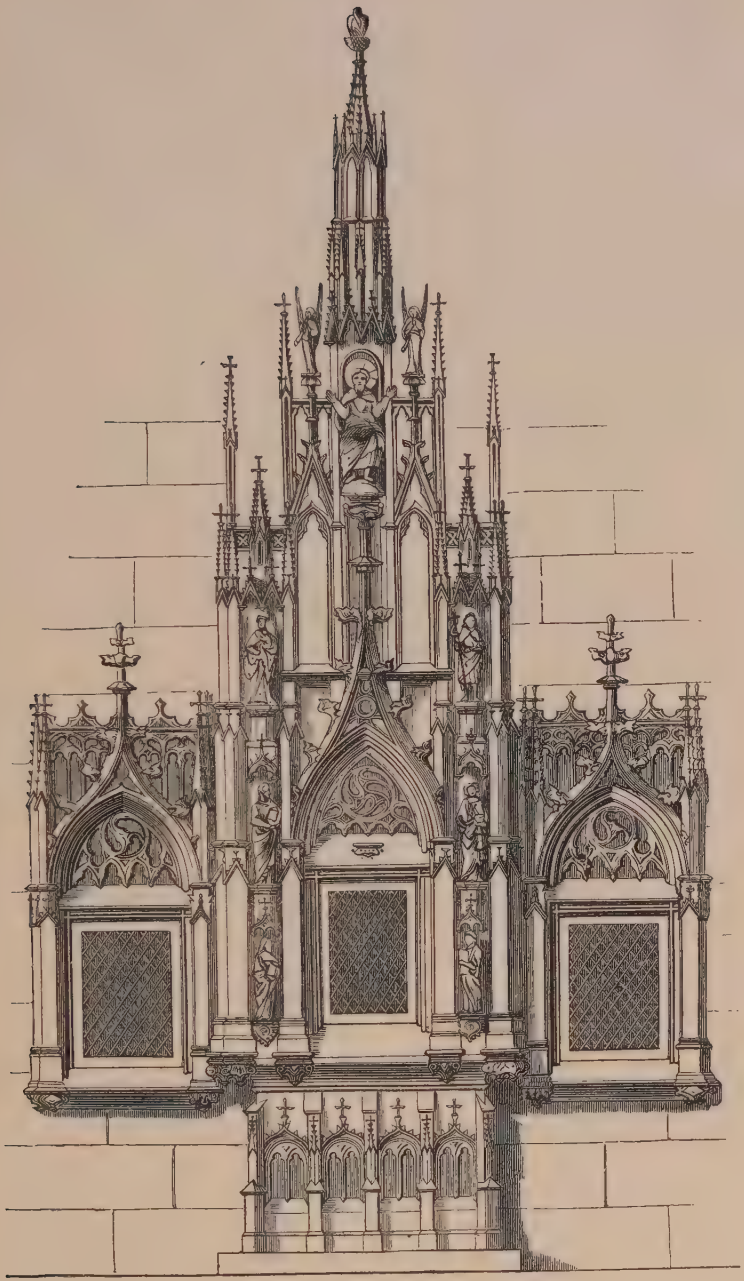


Fig. 159. Sacramental Shrine at Wiltenhausen. *See page* 222.

cloister churches at Marienfeld and Schildesche, in the Mary church at Lippstadt, the John's church at Osnabrück, the cathedral of Münster (A.D. 1536), the cloister church at Calcar, the Lamberti church at Düsseldorf, the church at Fürstenwalde (Fig. 160), the cathedrals at Meissen and at Merseburg, the Elizabeth church at Breslau (A.D. 1455), in the cathedral at Königsgrätz, in the cloister church at Heilsbronn, in the church at Schwabach, 46 feet high, and one in the cathedral at Ratisbon, 52 feet high; besides the still more stately one in the minster at Ulm, excelling all others in its height of 90 feet, begun in 1469, and the famous work of Adam Krafft in the Lorenz church at Nüremberg, 64 feet high, executed from 1496 to 1500. Other excellent tabernacles are in the Kilian church at Heilbronn, in the Michael's church at Hall in Swabia, the George's church at Nördlingen, the Dionysius church at Esslingen, the church at Crailsheim, the George's church at Hagenau in Alsace, and the Oswald church at Zug in Switzerland. Often we find wooden sacrament shrines, as in the church at Doberan, and in the Mary's church at Wittstock. Once there was a bronze one in the Mary's church at Lübeck, made in 1497 by Nicholas Rughesee, "aurifaber," and Nicolas Gruden, richly adorned with statuettes and architectonic ornamental forms.

Often, also, in the southern choir-wall occur similar shrines, which, however, are kept generally more moderate as to extension and ornament, and are used for holding the holy oils or the reliquaries. There are in the

cloister church at Freckenhorst, and the Meadow church at Soest, which possess three such tabernacles; also in the Reinoldi church at Dortmund, and in the cathedral at

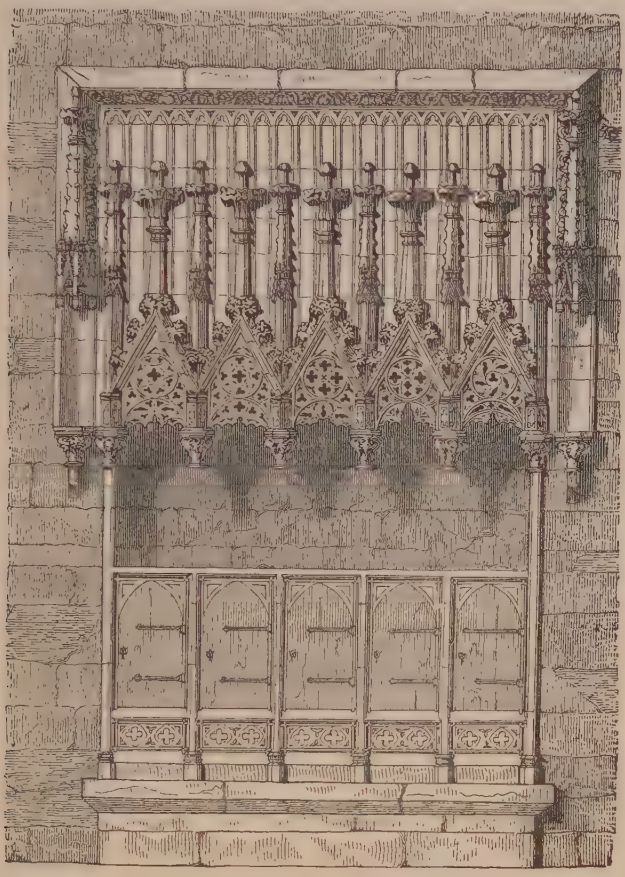


Fig 161.—Shrine at Cilli.

Münster; also in the cathedral at Magdeburg, and in the minster at Ulm. An especially ornamental shrine, with an elegant canopy, is in the church at Cilli in Steiermark (Fig. 161).

Of wooden chests for holding decorations of different kinds, we may mention an early Romanesque one marked with *Ave Maria*, and membered with carved round arch arcades, in the church of Notre Dame de Valère at Sitten in Wallis, behind the high altar, as also a late Gothic one, decorated with foliated ornament, in the monastery of Wettingen near Zurich.

VIII.

PAINTED AND SCULPTURED DECORATION.

I. WALL-PAINTINGS.

FROM the earliest period wall-painting was adopted in Christian basilicas as the principal medium for the decoration of the interiors. In the early Christian period *mosaics* were used for the decoration of the basilicas, an art which had been inherited from classical antiquity. In the great altar apse was enthroned the colossal form of the Redeemer, surrounded by the symbols of the Evangelists and the Apostles, or of the saints of the foundation. On the wall of the triumphal arch were generally represented the twenty-four elders of the Apocalypse, in white antique festival dress, holding their crowns in their hands, in order to lay them down on the altar of the Highest. Scripture scenes are also represented on the walls of the nave, especially on the arcades of the nave. These works make a powerful impression by their magnitude and by their beautifully architectonic,

rythmical arrangement. In order to compensate for the mean effect of the figures, and to raise them into an ideal sphere, they were placed on a sky-blue, and afterwards, for greater splendour, on a golden back-ground.

Examples of such decoration from the early Christian times, and, in fact, of the fourth and fifth centuries, are to be seen in the transept of St Paul's church, outside Rome; in the altar niche and on the triumphal arch of the church of Saints Cosmas and Damianus; and on the nave-walls of St Maria Maggiore; but the altar-apse received its mosaic decoration later. There then succeed the mosaics in St Vital and St Apollinare Nuovo at Ravenna, and the remains in St Sophia's at Constantinople, both of the sixth century, besides those of St Apollinare in Classe near Ravenna, of the seventh century. Charlemagne also had his minster at Aix-la-Chapelle ornamented with such decorations, which, however, have perished. But the churches of St Prassede at Rome, and St Ambrogio at Milan, possess mosaics of that time; to which belong also, but a little later, the works in the cathedral at Parenzo in Istria. St Mark's at Venice, the Capella Palatina in the castle at Palermo, and the cathedral at Monreale, possess the most complete series of such mosaic works of the Middle Ages.

In the North, it was only in rare exceptional cases that art could use such a costly material, and such a difficult class of work. But as a substitute, even in an early period, wall-painting was used, which was executed on the dry plaster, and which we must carefully

distinguish from *fresco work*, which arose in Italy during the fourteenth century, in which the colours were laid on the lime while wet, in order that they might be incorporated permanently with it. The *Romanesque epoch* is, for the whole North, the real golden-age of wall-painting. The smallest village church required its painted decoration, even if it had to be limited to the apse, or perhaps to the walls of the choir. In larger or more richly decorated churches, all the surface of the walls of the interior appear to have had their painting. In the apse was Christ enthroned, or else the Madonna, between apostles or other saints; in the other parts were introduced representations in manifold variety out of the New Testament. But there was also associated with them a series of symbolical pictures from the visions of the prophets or of the Apocalypse. The arrangement is an architectonically connected one. Single figures or scenes often receive as a border a painted niche with canopy in the known forms of the Romanesque style, or else they are enclosed in a medallion. The ground is blue, often with a green border; the figures are drawn with deep outlines, and the colour shows few traces of shading or of other modelling. When the vault was adopted in the Romanesque system, the surfaces of the vaults were also painted, and when these were membered by ribs, the latter, too, had a simple ornamental painting, the chief designs of which are riband-work and flower-garlands.

Examples of Romanesque wall-painting in Germany from the twelfth century are still, in spite of oft-repeated demolitions and later white-washings, to be seen in various countries. A series, distinguished by its value and the symbolism of the representations, is in the lower church at Schwarz-Rheindorf (about 1151); one in the choir of the cathedral at Soest; several figures in the Byzantine style in the entrance-hall of the church of the monastery of Nonnberg at Salzburg. Of the end of the Romanesque period, the paintings of the chapter-house at Brauweiler, and in the baptistery near St Gereon in Cologne. In Westphalia there are the able works in the Nicolai chapel at Soest, and in the small but richly-decorated church in the village of Methler near Dortmund. One of the most complete series of Romanesque wall-paintings is to be seen in the cathedral at Brunswick, of the end of the twelfth century, on the walls and vaults of the choir and the transept. In the choir we see representations from the life of Christ and of the genealogy of David. On the side walls are painted the legends of the protecting patrons of the cathedral; that on the south, St Blasius and Thomas à Becket; that on the north, John the Baptist. Numerous legendary and symbolical representations are associated with them. In South Germany, the cathedral of Gurk in Carinthia contains remains of Romanesque wall-paintings. Ranking with these works we have, as a single example of the handsome painting of Romanesque wood ceilings, the one still preserved in

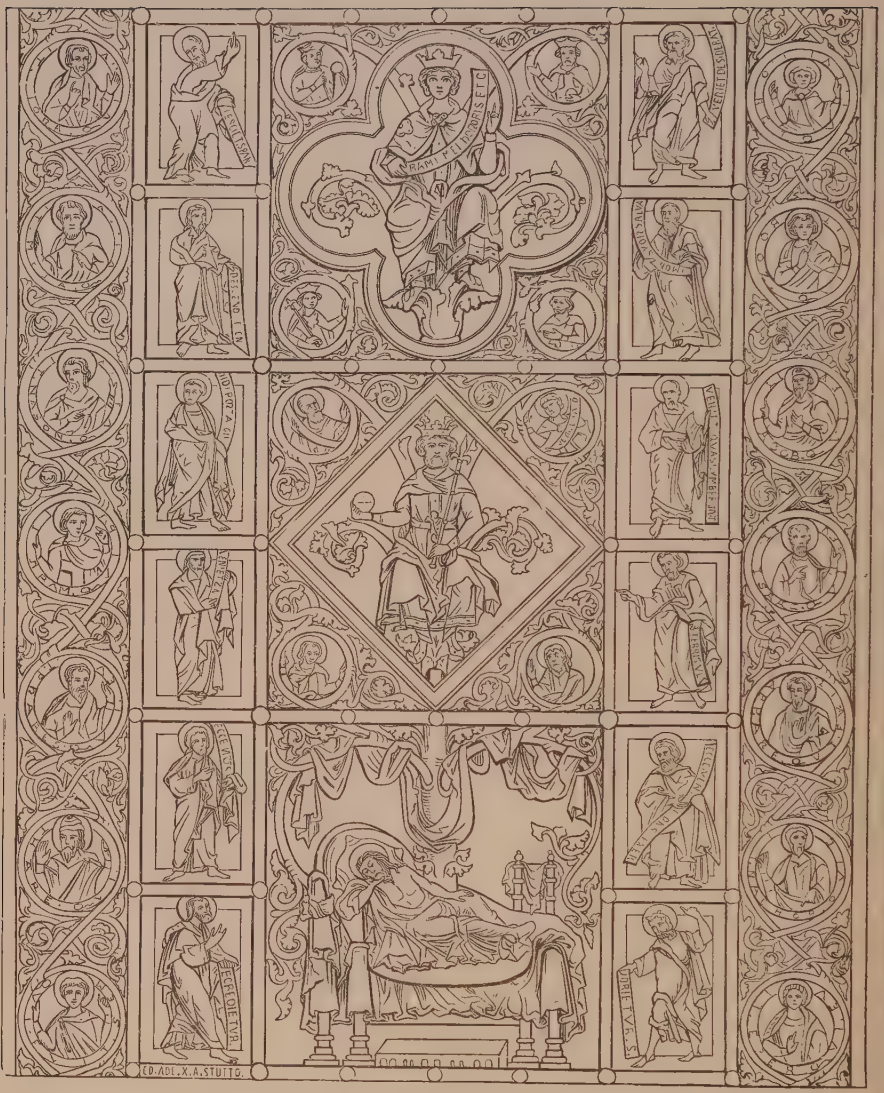


FIG. 162. Ceiling from St Michael at Hildersheim. *See page* 231.

the nave of St Michael at Hildesheim (Fig. 162). It contains, within handsome architectonic membering, the Fall, and the genealogy of Christ, the so-called Root of Jesse, to which are added numerous figures and busts of the patriarchs and of the prophets.

In the *Gothic epoch*, wall-painting was almost totally displaced by the organism of the architecture, and was reserved for the decoration of single architectural members, as well as, occasionally, for the ornamentation of the smaller chapels, or of the vaults. But this simple decoration was, as a rule, allowed only for particular parts of the building. Thus, the vault-ribs sometimes completely, but often only near the key-stone, received, with the latter, gilt or coloured ornaments, on a blue or red ground. This colouring was also introduced on the capitals of the compound piers. Middle Age *polychromy* (of many colours) often adopted the experiment of relieving the gilt foliage on parts of these compound piers by a blue or a red ground alternating, and then continuing the series of the colours in the corresponding pier of the opposite row. Lastly, the doorways in the entrance porches were also painted and gilt. In general, the parts of the building erected in freestone were unadorned; the vault ceilings were sometimes painted on a decorated ground, blue, in remembrance of the vault of heaven, with golden stars, or, in isolated cases, as in the Mary's church at Colberg, they received paintings. The *Dances of Death* form, in the Middle Ages, an especially favourite subject for wall-painting; they were introduced, as a

rule, in a chapel lying to the north, as in Mary's church at Lübeck and at Berlin, but also on the walls of the churchyards, as in Basle and Berne. Of the remaining Gothic wall-paintings are to be mentioned those in the apse of the church at Brauweiler, in the choir of the cathedral at Cologne, in the Thomas church at Soest, in the Vitus chapel at Mulhausen on the Neckar, but especially the paintings in the chapel of the Burg Karlstein, and in the Wenzel chapel of the cathedral at Prague. The choirs of the cathedral at Breslau and of the cathedral at Prague offer examples of painted decoration on the exteriors of churches. The colossal Madonna picture in the choir of the Castle church at Marienburg exhibits a mosaic painting.

2. GLASS-PAINTING.

In the Romanesque epoch it was the magnificent lighting apparatus which gave to the interiors of the church the light necessary for the sacred services. The windows, small in any case, were, if not hung with tapestry, early provided with coloured panes of glass. From that time it was the general custom, during the Middle Ages, to subdue the natural daylight by panes of various colours, and by this means to raise the striking impression of the interior. The coloured glass-paintings of the Middle Ages, until the fifteenth century, retain a tapestry character, and, by the grouping of colours, choice of ornaments, and happy arrangement, produce a beauty and harmony which prove them to

be *chefs-d'œuvre* of Middle Age polychromy. In the Romanesque epoch, on account of the small and not very numerous windows, glass-painting only appears in modest dimensions; but in proportion as Gothic art had destroyed the flat wall surfaces, and had turned the whole building into a transparent glass-house, so glass-painting attained its more complex right, and became, for the decoration of the interiors, the proper art for giving tone to the whole building. The method of working is, and remains during the whole period, a mosaic one, for its greatest compositions are made up of single coloured pieces, which are carefully leaded together. Their drawing is, as with the wall-paintings of the Romanesque epoch, purely one of outlines, the powerful lines of which were made with black lead. Thus the question is properly one of glass-mosaic, and not of glass-painting. But it was really within the narrow bounds of this system of working, and conditional on it, that, in this epoch, was discovered the true style of ecclesiastical glass-painting, which does not make the windows frames for pretended oil-paintings, but endeavours to cover them with shining, handsome tapestry.

In the Romanesque period, the decorative forms of which were made available for glass-painting until the fourteenth century, the tapestry character remains exclusively dominant. The figures or biblical scenes are inserted in round or angular medallions, and the whole is bordered and connected together by handsome framework, principally of Romanesque leaf patterns. The

colours are of a depth and translucency not again attainable in later epochs. France, in its large cathedrals of the early Gothic period, especially in Bourges and Chartres, is still immensely rich in large series of such glass-paintings. In Germany, only single examples are preserved, of which we may mention the few in the cathedral of Augsburg, in St Cunibert at Cologne, in the church at Helmstadt (Fig. 163), and in the monastery of the Holy Cross near Vienna.

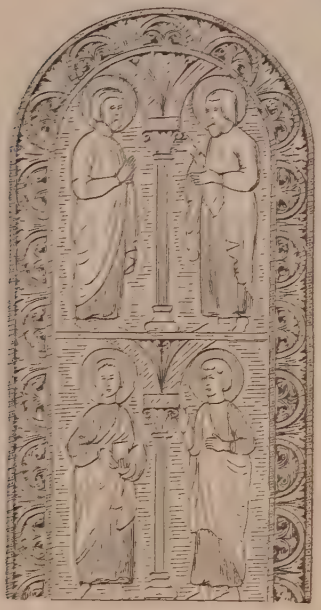


Fig. 163.—Glass-Painting in the Marienberg Church at Helmstadt.

Glass-painting is more richly developed in the Gothic epoch, during which the tapestry character is retained; but connected with it, corresponding to the spirit of the time, is a more architectonical treatment, while its figures are generally placed in rich Gothic tabernacle-work. But they guarded themselves in this from the inconsistency of giving to these airy buildings the appearance of stone or wooden reality by the colouring and shading which we see so often in modern glass-paintings. These rich canopies often rise like golden fancy pictures; and while a patterned tapestry ground is given to them and to the figures, the intention is most positively expressed in acknowledging the tapestry style as the only suitable one.

Thereby, the drawing of the figures becomes slimmer and more flowing, and the tone of the colours, notwithstanding their splendour, is milder, lighter, and more transparent. Among the German glass-paintings of the Gothic

Fig. 164.—Glass-Painting from the Cathedral at Ratisbon.

period we find the most beautiful in the nave of the minster at Strasburg, the cathedral at Ratisbon (Fig. 164), the Catherine church at Oppenheim, and the

minster at Freiburg in the Breisgau; and also, in the choir of the cathedral at Cologne, and the cloister church at Königsfelden in Switzerland. Among the most comprehensive and most important works of the fourteenth century are the glass-paintings in St Martha's at Nüremberg, one of the original flat-roofed cloister churches with nave and four aisles. The five choir-windows contain the history of the Creation, the life of Christ, and also pictures of the prophets; in the middle window is the Lord's Supper, as well as the raining of manna, Jacob's ladder, Noah's ark; in the fourth window is the Passion; in the fifth, the events of the Resurrection; in the sixth, a large representation of the Last Judgment; in the seventh, the outpouring of the Holy Ghost, and the Veronica cloth with the portrait of Christ adored by Peter, with the pope, cardinal, and bishop; then, St Ursula and the torture of the ten thousand virgins; in the eighth window, the life of St Martha; and lastly, there are three windows, in the southern side aisles, with single saints of great beauty. The stricter Cistercians thoroughly disdained the richer pomp of colours, and contented themselves with ornamental windows, which were executed in gray on gray (*grisailles*), and often, by their highly decorative beauty, made one forget the want of coloured figures. Examples are in the abbey churches at Altenberg near Cologne, and at Heiligenkreuz in the Wienerwald.

In the course of the fifteenth century, glass-painting experienced the influences of the revolution which was

effected by the rising naturalism and the development of oil-painting in Northern art. It became now real painting, and the paintings were formed larger, the drawing freer, and, by varied gradations, the colour grew into a richer fulness. But with this transformation the old architectonic tapestry style was left off, and the glass windows approach more and more the character of independent paintings. Fine works of this time are in the northern side aisles of the cathedral at Cologne, in St Sebald and St Lorenz at Nüremberg, in the minster at Ulm, in the John's church at Werben, in the Meadow church at Soest, the John's church at Herford, &c., &c.

3. TAPESTRY.

The church of the Middle Ages required for various purposes a great number of tapestries,—for *dorsalia* at the back of the choir-stalls, for closing the doors and windows, for the protecting enclosures of the altars, for the veiling of the sanctuary during the fast-time (*fasting-cloths*), and especially for clothing the walls and the floor. At first the tapestry came from the East, until, in the eleventh century, a tapestry-manufactory was formed at Palermo, which, under the hands of Saracen and Byzantine workmen, imitated with ability the Oriental patterns. These old silk webs, of which we find remains here and there in collections, show a strictly architectonic style, and are covered with figures of animals of a typical character, such as griffons and unicorns, lions and

elephants, peacocks and parrots. In the Northern cloisters, tapestry-weaving was learned and soon practised, even from the beginning of the Romanesque epoch, and the circle of representations was increased by biblical and symbolical scenes, to which were added representations out of favourite poets. Besides, tapestry-embroidering was an occupation followed with zeal in the nunneries. From the fourteenth century, carpets painted with size-colours on linen were also made. With the decadence of historical representations, and, moreover, with the entrance of Gothic art, there appears in use a frieze-like composition, hand in hand with a naïve naturalistic border, which drives out the severe style of the earlier times. Interesting tapestries of the Romanesque period, partly with antique mythological representations, are to be seen in the treasury of the collegiate church at Quedlinburg; others of the same time, with Christian representations, in the cathedral at Halberstadt, intended for the backs of the choir-stalls. A complete selection of tapestries is in the monastery of Wienhausen near Zelle, one of them an embroidery with the history of Tristan and Isolde; others in the St Elizabeth church at Marburg, in St Sebald and St Lorenz at Nüremberg, and also in many church treasuries.

4. PAVEMENTS.

The floors of the early Christian basilicas were covered with mosaics, which, made of pieces of marble

of various colours, represented different geometrical patterns in circles, diamonds, and similar forms. We still find such foot-pavements, under the name of *opus Alexandrinum*, in many Romanesque basilicas. They consist principally of small pieces of red, green, and yellow marble, which are often arranged in frames round a larger slab of that handsome dark red *rosso antico*. But besides such purely ornamental floor-mosaics, there were also some with representations of figures, principally of white and black stones placed together, in which is to be recognised the imitation of the ancient custom of the *opus tesselatum*. Remains of such mosaics of the early Romanesque times are seen in the crypts of St Gereon at Cologne. Others, from the choir of the cathedral at Hildesheim, have been preserved in the Laurentius chapel there.

Such mosaics, however, appear not to have been made later than the eleventh century; for even then Bernhard of Clairvaux was zealous against the introduction of figures of saints into the pavement, as it was contrary to reverence. From that time appears the custom of using burnt and glazed tiles, with patterns inlaid with colours, for the pavement in churches. They form tapestry patterns, in which purely mathematical arrangements often mix gracefully with flower-work, and free figurative representations, principally after the manner of ancient fables. The ground is either dark red with drawings in light yellow, or, on the contrary, the drawings appear in red on a light ground. The

patterns, which generally have a beautiful effect, and are distinguished by a happy filling in and breaking up of the flatness, recur with uniformity in the different countries,—in England, in France, and in the German and Scandinavian North. Remains of such pavements, which were often displaced at a later period by tomb-

Figs. 165 and 166.—Pavement from St Paul's in Worms.

stones, are found in the chapel at Althof near Doberan, in the cloister church at Doberan, the cloister church at Ammersleben near Magdeburg, in St Paul's at Worms (Figs. 165 and 166), the church at Königsfelden, and elsewhere.

The so-called labyrinths in the floor, which arose from antique traditions, are more rarely found in Germany than in France. They often served pious pilgrims as a substitute for a pilgrimage to Jerusalem, and in France they received the name of *chemins de Jérusalem*. To glide on their knees through the labyrinth in the cathedral at Chartres, as far as the centre, was a pious, penitential exercise, which required an hour's time; the way travelled amounted to 668 feet. In Germany no

such work is to be shown, except a labyrinth, now almost vanished, in St Severin's at Cologne.

5. SCULPTURE.

We have, lastly, in order to complete our description of the artistic decoration of churches, to consider the sculptured ornamentation which came into use in and on God's houses in the Middle Ages. The ancient Christians, in their just abhorrence of the heathen worship of marble statues of gods, at first excluded sculpture completely, and confined all their artistic decoration to painting. With the exception of the bronze statue of St Peter in St Peter's at Rome, of the half-destroyed and restored marble statue of Hippolytus in the museum of the Lateran, and a few unimportant statuettes of the Good Shepherd, there is no ancient Christian work of sculpture to be seen. Byzantine art also strictly excluded sculpture, and devoted itself with all its strength to the production of mosaic painting.

The result of this feeling is still dominant in the early Romanesque period, when churches abound with the richest possible pictorial decoration, but hardly ever have an original sculptured ornament. It was in the twelfth century, when a freer flight of decorative sculpture was unfolded in the architectonic members, that the churches first began to be decked with statuary. The choir railings, concerning which we have already spoken at page 202, were the first to be ornamented with sculpture. These works are not always executed

in stone, but often in a fine stucco,* which was much used for such works in the Romanesque epoch. Sometimes the galleries have also this kind of decoration. thus we find it in the western gallery in the church at Gröningen near Halberstadt, where Christ, with the apostles, is represented sitting, in a severe style. Besides, in single cases, stucco reliefs occur on the wall surfaces over the arcades of churches, as in St Michael at Hildesheim, and in the church at Hecklingen. Single parts of architecture were sometimes adorned with sculpture, as the columns overloaded with reliefs, in the crypts of the cathedral at Freising.

In the second rank stand the *doorways*, which at first were quite unadorned; as, for example, that of the eleventh century, on the west side of the cathedral at Würzburg; then they were covered with ornamental sculpture, and lastly with figurative decoration. At first the sculptured decoration of the portals was confined to the filling up of the tympanum with a relief. The enthroned Saviour, generally sitting on the rainbow.

* M. Viollet le Duc, in the article on stucco in his "Dictionnaire de l'Architecture," vol. viii., describes it as "composed of lime, very fine sand, of the dust of hard limestone, or of marble, with which masonry, and sometimes even works of carved stone, were covered, in order to obtain, on the exterior or in the interior, polished surfaces without any appearance of joints, and were decorated with delicate sculpture or paintings." He quotes as an example of the use of this material, in the Carlovingian period, the small church of Germigny des Prés, where it is still to be seen in the interior of the centre bell-tower, the bays of which are composed of an archivolt resting on two small pilasters, constructed solely by the help of a fine white stucco, which was very hard, and cut by the chisel when still damp. It was, however, used sparingly.—*T.*

accompanied by the symbols of the Evangelists, as in the cathedral at Soest, or by patron saints of the church, as at St Godehard's at Hildesheim, is the most favourite subject of these representations. Christ, between the wise and foolish virgins, or the crucified One between Mary and John, often occurs. We see also the figure of Christ in a medallion, held by kneeling angels; as, for example, in the church at Balve in Westphalia. Sometimes we find something symbolical, as the two resting lions, which are to be seen on the south portal of the church at Hamersleben. Soon the doorways are extensively covered with sculptures; not only does the tympanum receive its relief, but sculptured works, statues, and smaller groups or single figures are introduced on the portal-walls between the columns, and even on the archivolts. This more magnificent development of the doorway-sculptures appears to have come from France, and to have been extended also in Germany during the thirteenth century This effort is shown, though still obscure in phantasy and rough in expression, with a perfectly confused arrangement, on the chief doorway of the Schotten church at Ratisbon; better arranged but still rather stiff, on the gallery-door of the minster at Basle; in exuberant fancy on the south portal of the Magdalene church at Breslau; and with the noblest ornamental accompaniments on the grand door of St Stephen's cathedral at Vienna. The cloister church at Tischnowitz in Moravia, and the church at St Jak in Hungary, possess two of the richest Romanesque doorways. The northern

chief doorway of the cathedral at Bamberg has, on the tympanum, a representation of the Last Judgment; on the columns of the walls, statues of the prophets, who bear on their shoulders the apostles; and then on either side, the triumphing church, and the blinded one, a synagogue represented with a bandage over its eyes. The northern of the doorways on the east side has, in its tympanum, the enthroned Madonna honoured by saints and angels; the southern has on its wall, statues in the noble early Gothic style, and among them those of Adam and Eve. The southern doorways of the cathedrals at Münster and at Paderborn have important statuary decorations, but the *chef-d'œuvre* of the German doorways of the thirteenth century is the golden door in the cathedral at Freiberg; on the walls are Old Testament figures, which have a prophetic relation to Mary and Christ, in the tympanum, the enthroned Madonna honoured by angels and by the three holy kings; and on the archivolts, a skilfully-executed representation of the Last Judgment. To give an idea of the richness of such portals, we offer the view of a foreign work, the "portico della gloria," in the cathedral at Santiago de Compostella (Fig. 167).

There is also found on other parts of the Romanesque church-building, especially on the exterior of the apse, sculptured ornament; it is either symbolically fantastic, as in the church at Schöngrabern, or playfully humorous, as in the hunting tales of the apse at Königslutter.

The last-mentioned works show already, in the

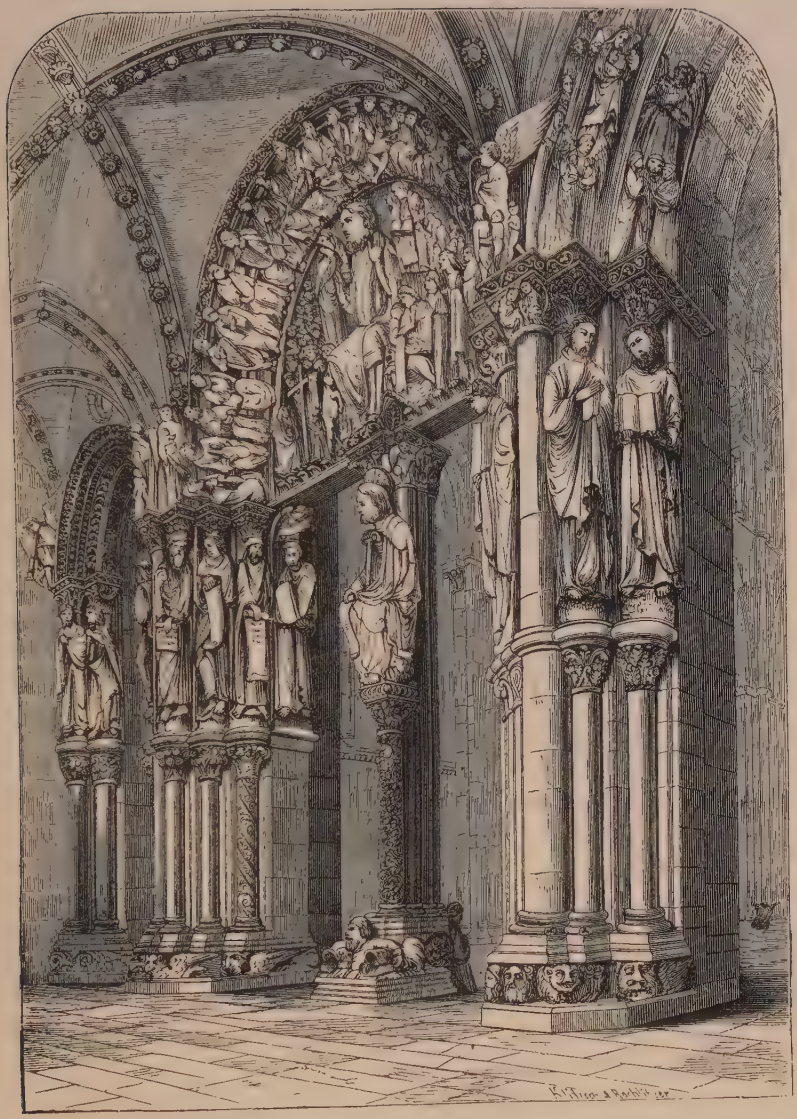


FIG. 167. Doorway in the Cathedral at Santiago de Compostella. *See page* 244.

fulness of idea and execution, the influence of the Gothic epoch, which, especially in France, assisted sculpture in its splendid development; for, there, the great cathedrals at Chartres, Rheims, Paris, Amiens, and many others, in their doorways form an inexhaustibly rich series of sculptures, in which deep-meaning symbolism is united with the broad unfolding of historical scenes. The work of Redemption, from its first conception in the creation and fall of man, to its final result in the Last Judgment, is represented; numerous typical and prophetic relations out of the Old Testament are introduced; and even the vicissitudes of daily life, with the events of the year, are brought into direct relation with the method of divine salvation, and thus a real *biblia pauperum* was made, which was available to every one, with its stone pictures for doctrine and edification. With these are ranged the legends of the saints, in the detailed relation of which the sculptors of the time were so unwearied, for, as a rule, not only the Madonna, but also the patron saints, have a separate portal.

In Germany, sculpture, in power of interest, stands remarkably in the rear of France; the great Christian circles of ideas are reduced more into single compositions, which often appear only as episodes. It was in the thirteenth century, and in the first half of the fourteenth, that sculpture was freely developed in the decoration of the churches; but in later epochs the architectonic decoration, especially the tracery-work, retards the free pictorial ornamentation, and limits it to single

subjects. However, the interior of the church again appears richly furnished with sculptured works. It was a favourite arrangement to attach to the piers statues of the apostles and other saints, placing them on brackets under beautiful canopies. Handsome works of this kind, of the fourteenth century, are in the choir of the cathedral at Cologne, in the nave of the minster at Freiburg in the Breisgau, in St Sebald at Nüremberg, &c. In the Reinoldi church at Dortmund there stand, on each side of the choir entrance, isolated and under lofty canopied pyramids, Charlemagne and St Reinold. The middle pier in the southern arm of the transept of the minster at Strasburg is completely covered with statues.

At this time, the exteriors become richest in sculpture, as is seen especially on the doorways. The most comprehensive work of this kind in Germany is the decoration of the minster at Strasburg, belonging, for the most part, to the end of the thirteenth century. The death of Mary and her coronation are represented in the tympana of the Romanesque membered doorways of the southern arm of the transept. They are the chief works of this epoch. Thus, the three doorways of the western façade represent the history of the Redemption, which goes back to the history of the Creation, and reaches down to the martyrdom of the apostles, in numerous statues, small groups, and reliefs. With the picture of the Last Judgment, on the southern doorway, stand, in a judicious relation of ideas, the figures

of the Wise and Foolish Virgins. Next to this magnificent work come the sculptures of the western doorway, and of the entrance-hall of the minster at Freiburg in the Breisgau. Among the statues stand prominent the church and the synagogue, the Wise and Foolish Virgins, Magdalene, and Mary the mother of James, John the Baptist, Abraham and Aaron, then the allegorical figures of Luxury and Slander, as well as of the seven liberal arts. If these works still belong to the second half of the thirteenth century, the sculptured decoration of the western doorway of St Lorenz in Nüremberg passes into the fourteenth century. Besides the centre statue of the Madonna, which has at its sides Adam and Eve and two patriarchs, the life of Christ, from His birth until His coming again at the Last Judgment, is represented in many small reliefs. In St Sebald it was not possible to bring together a complete composition, and, accordingly, the several ideas had to be divided on various doorways, of one of which, the so-called Bridal portal, with the Foolish and Wise Virgins, we give a view (Fig. 168). However, the western doorway and the open entrance-hall of the Lady's church (completed 1361) is to be noted as a model of a larger complete composition. In South Germany, where stone sculpture has shown its most splendid results, are to be seen, besides the two doorways in the choir of the cathedral at Augsburg, the three doorways of the minster at Ulm, the four beautiful doorways of the Church of the Holy Cross at Gmünd, the three doorways of the Lady's church at Esslingen,

the southern chief door of the collegiate church at Stuttgart, and the splendid western doorway of the minster at Thann. The south doorway of the façade of Cologne

Fig. 168.—Doorway of St Sebaldus at Nüremberg

Cathedral (about 1420) belongs also to this period; in Würzburg there are also the three doorways of the Mary's church (begun in 1377); and on the north door-

way of the upper parish church at Bamberg is the oft-repeated representation of the Wise and Foolish Virgins. At this time the exterior also is adorned with sculptured ornament, especially on the buttresses, which, for this purpose, have niches with canopies. The apostles, on the buttresses, surround the building like holy watchmen; as, for example, on the Mary's churches at Reutlingen and at Esslingen, as well as on our Lady's chapel at Würzburg, where Tilmann Riemenschneider executed these works in the beginning of the sixteenth century.

Lastly, the fantastic humour of the Middle Ages is displayed on the gurgoyles, which come out in shapes of various animals or figures of men caricatured. A rich example of this is in the Church of the Holy Cross at Gmünd, which is also adorned with statues of the apostles and prophets on the buttresses.

IX.

MISCELLANEOUS.

I. EASTER SEPULCHRES.

EARLY in the Middle Ages, imitations of the grave of Christ, and even of the church erected over it, were sought after. But although the pilgrims often brought the measurements expressly from Jerusalem, these imitations appear everywhere to differ considerably. In the best examples, the form of a central structure was retained, as is found in a beautiful one of the early Gothic style of the thirteenth century in a chapel behind the choir of the minster at Constanz. In the centre of the octagonal Gothic chapel stands a smaller octagon, of stone, in the genuine early Gothic form, ornamented on the exterior with the Twelve Apostles, the Annunciation, the Birth of Christ, Adoration of the Shepherds, and of the Three Holy Kings; in the interior with the sorrowing women at the grave, and the sleeping watchmen. Later, it became the general custom to introduce the Easter sepulchre, not in a special place, but in the church itself, either in a niche or in a chapel. Behind the high altar, in the

centre chapel of the choir corridor, in the Church of the Holy Cross at Gmünd, is to be seen a holy sepulchre, a valuable work of the fourteenth century, in which Christ lies stretched out in an open sarcophagus, surrounded by three sleeping watchmen. Behind the grave stand the two Marys, the Magdalene, and two angels. This is the favourite type adhered to for the holy sepulchres in the succeeding period; the most handsome and most beautiful of them is possessed by the Mary's church at Reutlingen, at the end of the northern side aisles. In the luxuriant architecture introduced at the beginning of the fifteenth century, besides the sleeping watchmen, the three women, and St John, it has, on the tomb, the half-figures of five apostles, and above it, in canopies, Christ and the Church fathers. Such holy sepulchres were formed for the purpose of a dramatic scene, in which they represented the burial of Christ, in a group rich with figures, as in the great stone sculptures by Adam Krafft in the Holzschuher chapel in the St John's churchyard at Nüremberg.

2. CLOCKS.

In many of the larger churches, clocks, for the regulation of the Divine service, were early introduced, the invention of which was ascribed to the famous Abbot Gerbert, afterwards Pope Sylvester II. (†1003). In the beginning of the twelfth century, striking-clocks were often used in churches, the dial-plate of which, till late in the sixteenth century, showed the old division

in twenty-four hours. From this custom were developed the handsome clocks provided with all sorts of mechanism for edification and amusement, which, even now, although in a later transformation, are still preserved in the minster at Strasburg and the Mary's churches at Lübeck and at Danzig. The clockwork, also, in the west façade of the Lady's church at Nüremberg, the so-called *Mannleinlaufen*, belongs to this section.

3. SOUNDING-VESSELS.

In several places we see, in the churches of the Middle Ages, pots or jugs of a long shape, so built in that their mouths form openings in the wall-surfaces, which were arranged, according to all appearance, for strengthening the sound. That such an intention really existed appears from an account of the chronicle of the monastery of the Cœlestines at Metz, which announces that a prior, on his return from the general chapters, caused pots to be set up in the choir of the church, in order to improve the singing and the resonance. But the chronicler expresses himself doubtfully and even scornfully of them, from which we may conclude that they were rarely used. However, such sounding-vessels may be seen, not only in a few churches in France, but in many places in Sweden and Denmark, as well as in Byzantine and Russian churches, so that it must have been thought of in imitation of the ancient custom of using sounding-vessels in the theatres. If sufficient researches were made, it is pro-

bable that they would be found more numerous in German churches than was previously supposed. Such vessels are to be seen in the burgh chapel of Old Baumburg near Kreuznach, as also in the choir of the former cloister church of Oetenbach at Zurich.

4. DOORS.

The closing in of the doorways in the churches of the Middle Ages, was, in the earlier epochs, effected by bronze slabs, when they had the means. The oldest examples in Germany are the four-winged metal doors with which Charlemagne decorated the minster of Aix-la-Chapelle. They are divided completely, in accordance with the ancient manner of art, into rectangular smooth panels, which were enclosed and separated from one another by frames, in the profiles, egg-mouldings, strings of pearls, and palm-leaves, of which the ancient forms were imitated as faithfully as possible. Besides this, each wing had a conventional head of a lion, the open mouth of which held a ring for a handle. In the Romanesque epoch, when the moulding of brass came to its greatest perfection, in place of merely ornamented work, doors appear the surfaces of which were ornamented with figurative reliefs. It is thus in the bronze doors prepared by Bishop Bernward, in the beginning of the eleventh century, for the cathedral at Hildesheim (1015), which in eight relievi, rather unskilfully treated, contain the history of the Fall, and, in as many, that of the Redemption Of a kindred style

is the brazen door, also of the eleventh century, on the south side of the cathedral at Augsburg, which shows symbolical and biblical representations on the thirty-five small relief tablets. In the twelfth century, a rich framework of arabesques is added to the figurative representations, as is shown on the brass door of the cathedral at Gnesen, with eighteen reliefs from the history of St Adalbert. In single cases, *wood-carved doors* are also to be seen in the Romanesque period, as, for instance, the winged-door in the northern doorway of St Maria in the Capitol of Cologne, which, in twenty-six smaller and larger panels, contains the life of Christ from his childhood to the sending of the Holy Ghost, enclosed in a framework nobly worked out.

In the Gothic times, the formation of the doors in accordance with ancient traditions is completely left off; the doors consist no more of frames and filled-in work, but of unmembered flat surfaces, the strong slabs of which are held in connexion with the angles of the door by iron mountings. With the thirteenth century appears to come in that kind of door which, by the artistic style of its mountings, gives a splendid testimony to the workmanship of the blacksmith of the time. These mountings are spread out over the surfaces in symmetrical branches, ending in conventional foliage, happily filling up the space as the ivy spreads its branches over walls or trees. Such artistic iron mountings have often been preserved in Gothic churches. But by its side occur also wooden doors of the Gothic

epoch, which are put together of strong frames with lighter panels, and are distinguished by the characteristic drawing and contour of the frames. Carved doors with ornaments in relief also appear in single instances; as in the Capuchin church at Salzburg, where there is one with the half-figures of Mary, John the Baptist, and the apostles, of the year 1470; and of the same year, in the minster at Constance, a richer door, ornamented with scenes in relief from the life of Christ, made by Symon Haider.

5. BELLS.

The first use of bells for church purposes cannot be proved by history, although the designations, *nola*, *campana*, seem to confirm the legend which asserts that they were first introduced, about the year 400, by Bishop Paulinus of Nola, in Campania. They are mentioned by Gregory of Tours in the sixth century; in the eighth we find them in German churches; and in the ninth they are universally in use, at first forged out of iron plates, but soon cast in a more artistic manner. In the late Gothic time they increase, with the church towers, to a colossal size.

An example of those primitive bells, of sheets of iron rivetted together, is in the museum at Cologne. It belonged to the Cecilia church there. Among the cast-metal bells in Germany, the oldest belong to the middle of the thirteenth century; still, some bells, without dates, which, by their undeveloped form, want of artistic treat-

ment, and the clumsiness of their technical execution, betray a great age, may belong to the early Romanesque period. The bell in the church at Idensee, near Wunstorf, is worthy of notice for the soft bending of the upper contour, marking the transition to a better membering. The bell of the church at Lühnde, near Hildesheim, of the year 1278 (Fig. 169), already shows the type peculiar to most Gothic bells; the rounding is extended

Fig. 169.—Bell at Lühnde.

at the upper ends, and springs in a sharp bend outwards; fine fillet-shaped members form, at the top and bottom, frieze-like bands, the first of which contains an engraved inscription. Besides these, the busts of Christ and of Mary are roughly carved on the surface of the bell. In the course of the fourteenth and fifteenth centuries the bells are not only larger, but also often adorned

with ornamental frieze and inscriptions sculptured in relief. These last contain, at first in the Latin, but afterwards in the German language, the name of the bell, a pious exclamation, or a proverb, and sometimes the date and name of the founder. A bell in the Martin's church at Siegen bears, for example, the following inscription :—

"Maria heisen ich, den lebendigen ruffen ich,
den donner verdriben ich, den doden luden ich.
Johann van Duren gosse mich in dem jar 1491, de dat Korn in Sigen galt sechs gylden un vier wissen pennike."*

6. GROUP REPRESENTING THE PASSION.

As in the Middle Ages it was customary at Passion-week to place before the people dramatic representations of the Passion of Christ, it was also a favourite idea to depict this theme for lasting edification, not only in sculpture on the altars, which have been already described, but also in isolated groups. These were generally raised near the church, often between two buttresses against the enclosing wall of the church, but sometimes enclosed in an architectonic arrangement specially made for it; as a rule they were worked out of stone. The majority of these works arose in the fifteenth and sixteenth centuries, among which must also be reckoned the holy sepulchres already mentioned, which were erected in the interior of the church. The

* "Mary is my name, The living I call,
The thunder I dispel, The dead I invite.
John van Duren cast me in the year 1491, when corn in Sigen was worth six gulden and four white pennies."

beginning and the ending of the Passion are the chief moments chosen for representation : thus, for the former, Christ praying on the Mount of Olives, while the disciples sleep ; for the latter, the Redeemer at the hour of death on the Cross, between the two malefactors ; at the side is the group of the pious women and St John. In single cases the *Mount of Olives* and the *Mount of Calvary*, the commencing and ending points

Fig. 170.—Station by Adam Krafft.

of the Passion, are connected by a series of pictures of the stations, which represent, in animated groups, the falling of Christ seven times under the burden of the cross.

One of the most complete examples, especially distinguished by artistic value, is that of the famous

"stations" by Adam Krafft, which point the way to St John's churchyard at Nüremberg (Fig. 170). A Mount of Calvary, with the three crosses and the weather-beaten statues of Mary and John, form the conclusion. Four great scenes of the Passion, by the same master, are on the east side of St Sebald, which depict the cross-bearing, the crucifixion, burial, and resurrection of Christ. Other *Mounts of Calvary* are in the churchyard at Colmar (1507); in the cathedral at Frankfort-on-Maine (1509); in the Leonhard's church at Stuttgart, a very excellent one of the year 1501; and one of the year 1468 at Lübeck. A similar Mount of Calvary placed under an arcade erected for the purpose is in the James church at Koesfeld in Westphalia. A column with the instruments of torture is often connected with it.

More numerous even than these crucifixions appear to have been the *Mounts of Olives*, which contain Christ praying in the Garden of Gethsemane, with the three sleeping disciples, Peter, John, and James. One of the earliest (of the first half of the fifteenth century) is in the choir of St John's church at Warburg in Westphalia; a noble work belonging to the beginning of the sixteenth century is in the Pleichacher church at Wurzburg; another, of the end of the fifteenth century, in the choir of the church at Hersbruck, near Nüremberg; a somewhat earlier one in St Emmeram's at Ratisbon; another, also there, in the upper minster; a truly skilful work, of the year 1506, in the Michael's church at Hall

in Swabia; a rather stiff wood-carving in the entrance-hall of the church at Oberzell, on the island of Reichenau. The *Mount of Olives* by the side of the church at Ueberlingen is especially complete, for an octagonal chapel-structure, with a star-vault, has been there erected for this purpose. Between the buttresses, instead of walls, are introduced wide arched openings, enclosed by a stone-bordering in imitation of a garden-hedge. In the space thus protected, but still open, are introduced the painted statues of Christ and the disciples on an eminence. The whole is an example of judicious architectonic arrangement.

7. CHURCHYARD LIGHTS.

In the churchyards, and also on single graves, it was a favourite custom in the Middle Ages to place, in small stone houses, a consecrated taper, as a so-called poor soul's light, and to kindle it at night in remembrance of the dead. Such lights for the dead are generally laid out in the form of a lower structure resembling a pillar, with the upper lantern-like part pierced with window openings, and terminated with a pointed roof. Examples of the early Gothic time have been preserved in the cathedral at Ratisbon and at the cloister church at Schulpforta. An especially ornamental one, of the fourteenth century, is in the churchyard at Paderborn; one ornamented with tracery at Stromberg in Westphalia; another at the cathedral at Munster; the largest and richest, thirty feet high, and ornamented with six

relief pictures of the Passion, was erected at Klosterneuburg in 1381. We find handsome lights for the dead at Freistadt in Upper Austria, and at Penzing near Vienna. Lastly, of an original arrangement, connected with a mortuary chapel, and accessible by a stone staircase, are the churchyard lanterns at Oppenheim and at Botzen.

APPENDIX.

SCHOOL OF THEOLOGY

APPENDIX BY THE TRANSLATOR.

AS there are several points of divergence between the ecclesiastical architecture of our own land and that which has been described in these pages, it will not be inexpedient to note some of the most striking peculiarities, and to illustrate them by a few examples, with the help of woodcuts taken from the "History of Architecture" by the author of the present volume.* As in various districts using the same language distinct dialects are spoken, so in the various countries using the same style of architecture there are, as it were, dialectic differences, resulting principally from the diverse characters of the several nations. It has already been shown that Christianity, as it spread itself through the countries of Europe, strewed, as it were, in its course, its churches, built on the models then considered appropriate; and thus must the early Romanesque style of architecture, or, as it is generally called, the *Saxon*, have been introduced into our own land, although it was modified by the native builders.

The later Romanesque, or *Norman*, was forced upon us by our conquerors, who give their name to the style. It also was affected by the architecture which it displaced; for although we have few remains of Saxon buildings, enough are left to show that the strong pier, which is one of the distinguishing features of English Romanesque architecture, was derived from that

* Lübke (W.), "Abriss der Geschichte der Baustyle," 1 vol. 8vo., Leipzig, 1868; the chapters in which work relating to English architecture have been of service in this sketch, supplemented, as they have been, by the best English authorities.

massive style; and as the ground-plan of many of the Norman buildings was the same as that of the previous Saxon ones, the length and rectangular termination of the choir, which are other features in which we differ from the continental nations, also testify to the same fact; for although apses do occur in early Norman buildings, they were soon discontinued, and we rarely find them in churches of a later period. The only Norman buildings with apsidal terminations in Scotland are the churches of Leuchars and Dalmeny. The arcade of Peterborough Cathedral (Fig. 171) furnishes us with an example of the solid round piers which were then used. They here alternate with compound piers. From the capital rises a half-engaged column, which is continued to the roof, as if it were intended that the building should have been vaulted. That, however, is not the case, flat roofs having usually had the preference.

Fig. 171.—Arcade in Peterborough Cathedral.

At the intersection were four massive piers supporting the central tower, which is another of our insular peculiarities. The ornamentation is less floral than on the Continent, being more restricted to geometrical forms. The *billet*, *chevron*, &c. (*vide* page 38, Fig. 35 *a* and *b*), especially occur. As a specimen of the ornamentation, an illustration is given of

some columns and capitals in St Peter's, Northampton (Fig. 172). It will be here observed that the shafts of the columns are ornamented with spiral flutings and other forms. On one of these columns it will be seen that small *knobs* are introduced into the ornamentation, which are also used in the arcade mouldings. An idea of the interior decoration of the churches may be

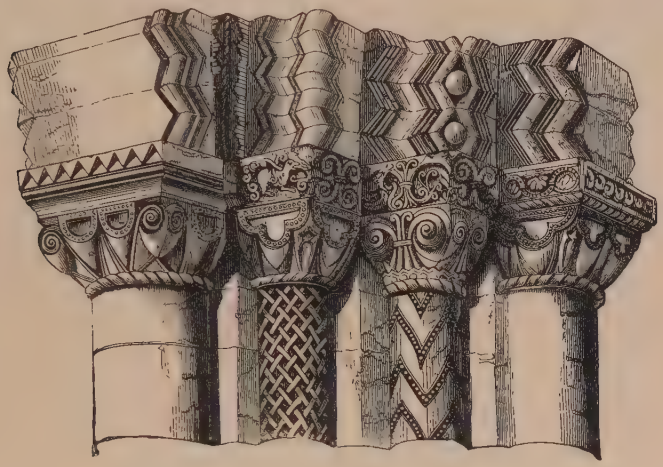


Fig. 172.—Capitals in St Peter's Church, Northampton.

formed from a study of Fig. 171. The exterior is generally plain, but relieved by flat buttresses, and having only small windows. Indeed, these Norman buildings bear no comparison in beauty with those which are built in this style on the Continent. The countries on the Rhine,* where this system flourished most, have certainly produced buildings which, in general harmony of effect, as well as in beauty of details, stand unrivalled. The south-eastern transept of Canterbury Cathedral shows what we might have attained to if the style had gained a firmer footing, and had not had to yield to the Gothic, which was immediately adopted, on its introduction, as the style most suitable to church building and to the genius of the nation. On this.

* A valuable work on these Rhine buildings is now being published in Germany, entitled, "Rheinland's Baudenkmäle," by Canon Bock.

the oldest portion of the building, is also to be seen the arcade moulding of interlacing arches, which was much used in this country. A beautiful specimen of this rich decoration, perhaps the finest in the kingdom, is to be seen in Kelso Abbey, which is also remarkable for the massive Saxon piers in the choir, and for its central tower, which is much rarer in Scotland than in the southern portion of the island, the two western towers being generally preferred there, as they are upon the Continent. This abbey, which was built in the twelfth century, may be considered a type of the Transition style; for though in the building the round arch predominates, the tower is supported by four pointed arches, as if the builders had perceived the constructive importance of the Gothic arch. This may also be taken as an additional testimony, if one were needed, that the pointed arch was principally adopted for its constructive importance, and that it did not arise from the effect produced by the interlacing arch-moulding, an ornament which was in use in this country many years previous to the introduction of the Gothic arch. But when its beauty was acknowledged as well as its strength, its use became universal, and many buildings which have Norman doors and windows below have pointed windows in the triforium and above.

It is in Gothic architecture that the characters of the nations of Europe principally assert themselves. Among the Germans, as Boisserée observes, in speaking of Cologne Cathedral, "the square and the triangle reign supreme," and their love of law and order often wearies us, and makes us desire something to break the monotony. The French often give way to playfulness and artistic tricks, but their love of beauty has caused them to produce buildings, such as the cathedrals of Chartres and of Rheims, which are the admiration of the world. In England there is neither the exuberance of fancy of the French, nor the excessive love of order of the Germans; but a quiet beauty is observable in our buildings which is not attained by either of these nations, although there may be features which to them appear rude and barbarous. The great breadth of the German cathedrals, in comparison with the length, makes them appear dwarfed,

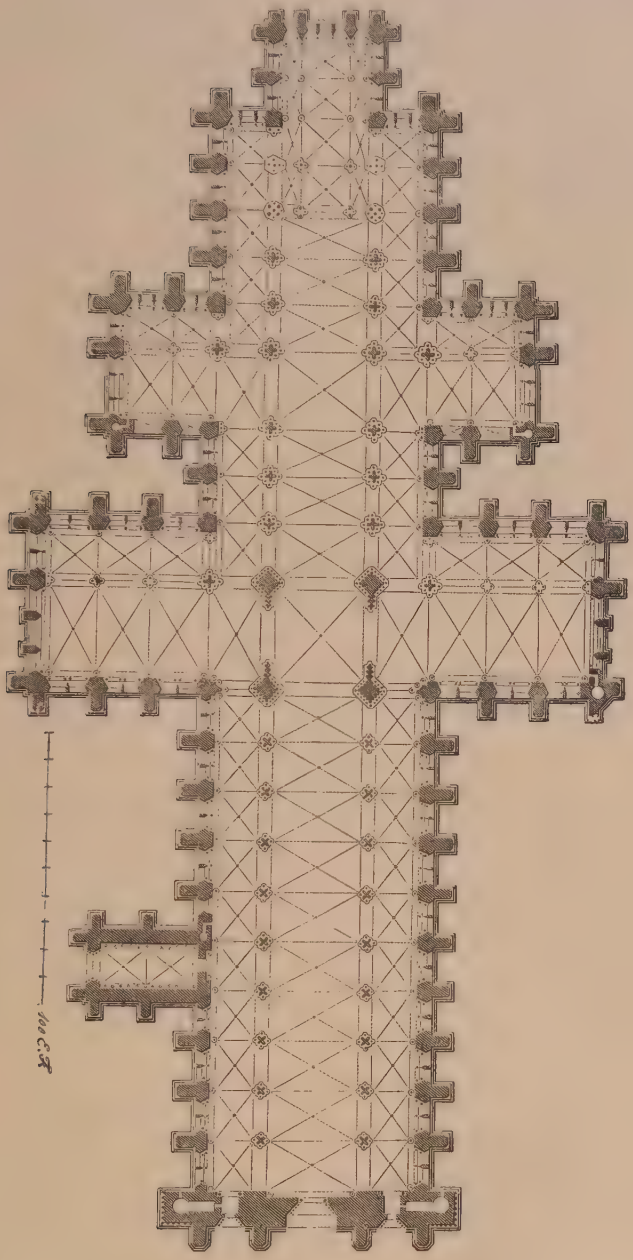


Fig. 173.—Ground-Plan of Salisbury Cathedral.

although in height they are generally superior to our own. An example of the length and rectangular termination of the choir,

Fig. 174.—Pier in Salisbury Cathedral.

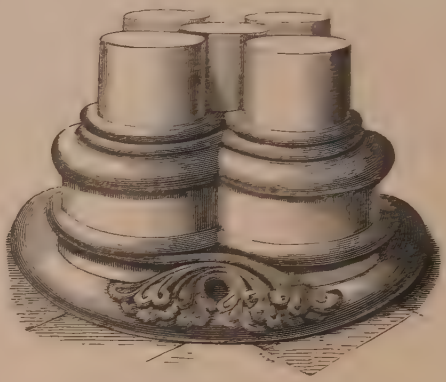


Fig. 175.—Base of Pier in Salisbury Cathedral.

which is a feature peculiar to the Gothic as well as to the Romanesque architecture in England,* is furnished by the ground-plan of Salisbury Cathedral (Fig. 173). Although, as mentioned at page 67, Canterbury Cathedral was the building in which the Gothic style was introduced into this country, Salisbury may really be considered the first thoroughly English cathedral (the architect of the former, William of Sens, being a Frenchman), and in it the English peculiarities at once appear. The choir is made nearly as long as the nave, and to it is added a lady chapel, which also ends as a rectangle. This rectangular termination of English buildings is objected to on

Fig. 176.—Triforium in Salisbury Cathedral.

* The apsidal terminations are decidedly exceptional. The supposed reason is given by Fergusson, in his "Handbook of Architecture," page 885.

Fig. 177.—Part of Nave in Beverley Minster.

the Continent, as being much inferior to the apsidal endings with the crown of chapels (*vide* page 72), which seem to form a completeness and finish to the whole; but it is perhaps this very completeness which we do not desire in this country, as by the for mer a still greater length is gained in appearance, and, besides, there is space for a large window, which, especially when filled with stained glass, produces a beautiful effect. Above the intersection rises the tower, which is finished by a spire; there is but one aisle on each side of the nave, instead of the double ones, which the Germans prefer,—Chichester Cathedral being the only building in England with double side-aisles,—and the transept arms project farther, thus giving a better-proportioned building, and one with greater pictorial effect. The compound piers are not, as in Germany, in one solid block (*vide* Figs. 72, 73), although such frequently occur, but consist of isolated columns, as in Figs. 174, 175, the capitals and bases being formed

of round mouldings or rings. In Fig. 175 may be seen again in use the spur ornament mentioned on page 28. Viollet le Duc, in his "Dictionnaire de l'Architecture," gives some beautiful specimens of this ornament, called in France *griffe*, at the same time expressing his regret at its disappearance, as it was so well suited to break the transition from the round socle to the square base of the pier. Fig. 176 gives a view of the triforium arches in Salisbury Cathedral, and Fig. 177 those of

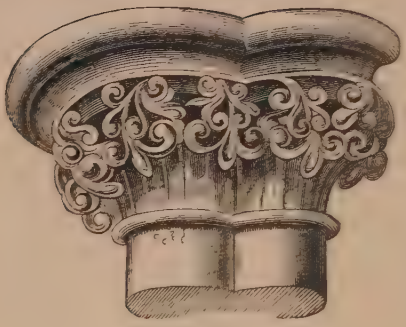


Fig. 178.—Capital in Salisbury Cathedral.

Fig. 179.—Capitals in Lincoln Cathedral.

Beverley Minster. It will be remarked, in the latter illustration, that the arcade arches alone seem to be supported by the piers, unlike those on the Continent, where these arches spring from the centre and sides of the pier, the responds, bowtels, or vault-bearers, rising to the vaults; but here some of these vault-bearers rest on corbels projecting from the clerestory between the arches, while others appear only at the base of the triforium.

Figs. 178, 179 show the style of foliage that was employed on the capitals, the latter affording another example of the compound piers with the columns isolated, instead of engaged, as on the Continent. The dog's-tooth, which was occasionally employed on late Norman doors, may here be observed in use. The buttresses do not form so important a part in the beauty of the exterior as in Germany, and instead of the ornamental pinnacles, which are there so abundant, the buttresses here have simple gable or pyramidal roofs, as will be seen in Fig. 180, part of the choir of Lincoln Cathedral. The flying buttresses are also plain, and have the appearance of being made for use more than for effect.

Fig. 180.—Part of Choir in Lincoln Cathedral.

As in Germany there are three distinct styles of Gothic architecture, which have already been described in these pages, so in England there are also three styles, the *early English*, the *decorated*, and the *perpendicular*. This last especially is peculiar to this country; for while in Germany and France architecture degenerated into

the "*flamboyant*" style, so named from the form of the flame, or fish-bladder (Fig. 82), which appears in the tracery, with us, although we have many specimens of the flamboyant, it was principally directed into the *perpendicular*, a style deriving its name also from the forms of the tracery in the windows, of which Fig. 181, from the chapel of King's College, Cambridge,

Fig. 181.—Window in Chapel of King's College, Cambridge.

furnishes an example; it has a Tudor arch (Fig. 83 *b*), as described on page 90, which was now the prevailing one. We give Fig. 182, from St Stephen's, Norwich, as a specimen of the richly-ornamented timber roofs, which were generally preferred in this country. However, it was during the prevalence of this style that vaulting attained its greatest perfection, and

the fan-vault in Henry VII.'s Chapel in Westminster Abbey (Fig. 183), with two others, stands unrivalled in its marvellous beauty. In the decoration of the exterior, instead of the richly-pointed gables (Fig. 68), a rectangular moulding is placed above the arch of the doorways, leaving a space for ornamentation on

Fig. 182.—Timber Roof in St Stephen's, Norwich.

each side of the arch, and on the towers and along the top of the buildings appear crenulated parapets, a form in favour during all the periods of English architecture.

Many of our churches have porches. One peculiar to this country is the *Galilee;* however, it is to be found in only three of our cathedrals, those of Durham, Lincoln, and Ely. The first is of considerable size, and the consistory court is held

Fig. 183.—Fan-Vault of Chapel of Henry VII., Westminster.

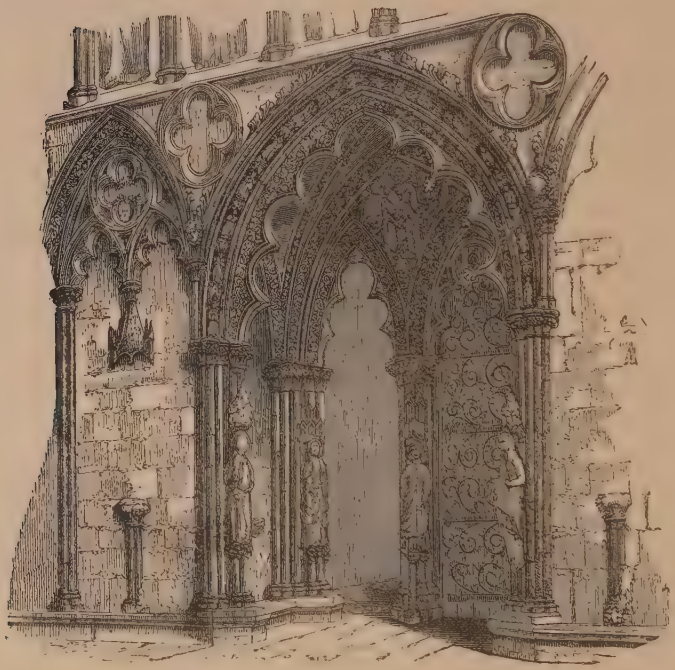


Fig. 184.—Doorway of Lichfield Cathedral.

in it; the second, which is cruciform in shape, is at the western end of the transept; the third, which is little more than a porch, is at the west of the nave.

I ought not to omit some notice of the chapter-houses, and will therefore quote the following from Fergusson's Handbook, page 885 :—"On the Continent it is true there are chapter-houses to be found, generally square rooms with wooden roofs, and not remarkable for their architecture. In England the chapter-house is an absolutely indispensable part of any extensive ecclesiastical establishment, and in almost every case is more carefully designed, and more elaborately ornamented, than the church itself, its only inferiority being size."

An example of the ornamentation of the doorways is furnished by Fig. 184, from Lichfield Cathedral; it belongs to the early English period. A few remarks on the other objects mentioned in the second division will be found under their headings in the glossary.

GLOSSARY OF TECHNICAL TERMS.*

ABACUS, a slab forming the top of a capital.
ACANTHUS, a plant imitated in Corinthian and Composite capitals.
AISLE, a wing, the longitudinal division of a church.
ALTO-RELIEVO, sculptures in which the figures considerably project.
AMBO, AMBON, a raised stage or oblong pulpit.
ANTEPENDIUM, the frontal of an altar.
APSE, a semicircular recess.
ARCADE, a series of arches blind or open.
———— MOULDING, *vide* page 18.
ARCHITRAVE, the lower division of an entablature.
ARCHIVOLT, the top of an arch, forming, as it were, an arched architrave.
ASTRAGAL, a narrow moulding, generally semicircular.

BALDACHIN, a canopy.
BASE, the lower part of a column or pier.
BASSO-RELIEVO, or BAS-RELIEF, sculptures in which the figures slightly project.
BAY, a compartment or division in a building formed by pilasters, buttresses, &c.
BILLET, a moulding, as Fig. 35*a* (French, *billette*).
BLOCKING-COURSE, a plain course of stone surmounting a cornice; also one forming a projecting line without mouldings.
BOWTEL, a round moulding or bead; also used for the small shafts of clustered columns, &c.
BUTTRESS, a projection for giving extra strength to the wall, and to resist the thrust of a vault.
———— Arched or Flying, a buttress in the form of an arch for the support of an upper interior wall, by directing the thrust on the exterior one.

CANOPY, a projecting covering over a statue, &c.
CAPITAL, the head of a column or pier.

* I have to acknowledge my obligation to Parker's "Glossary of Terms in Architecture," which has been of great service to me in the compilation of this Glossary; also to Eadie's "Ecclesiastical Encyclopædia," both of which works, especially the former, are worthy of high commendation. —L. A. W.

CENOTAPH (*κενοτάφιον*), an empty tomb.

CHALICE, the sacramental cup, described page 137 Figs. 106–111. In this country chalices of bone seem to have been made, as we find their use forbidden at a council (A.D. 787).

CHANCEL, generally applied to the east end or choir of a church, deriving its name from the *cancelli* or railings, it being the part of the church enclosed by them; in Germany, "*Kanzel*," a pulpit, is named from the pulpit having been at these railings.

CHEVRON, an inflected moulding, called also Zig-zag Fig. 355; the French name for this is *bâtons rompus* (broken sticks).

CHOIR, the easter part of a church, originally reserved for the clergy; it is generally separated from the nave by the rood-screen.

CIBORIUM, the original name for the baldachin or canopy over the altar; afterwards applied also to the vessel on the altar for holding the consecrated host (Fig. 113).

CLERESTORY, the upper part of the nave of a church, with windows which rise above the triforium or nave arches.

CLOISTER, a covered wall round the quadrangle of a monastery, often applied to the monastery itself as a *cloister-church*.

COLUMN; for description, *vide* page 27.

——— Clustered, a pier composed of several columns together.

CONCHA, a term applied to an apse.

CORBEL, CORBEIL, a stone projecting in order to support moulding, responds, &c.; often carved as a head or other figure.

CORNICE, a moulded projection used as a finish to the top of a wall, &c.

CREDENCE TABLE (from the Italian, *credenziera*, a small table on which are placed the cruets and other vessels containing the wafer, &c., before consecration.

CRENULATED, a term applied to the form of battlements.

CROCKETS, small projecting knots of foliage on the roofs and buttresses of Gothic buildings.

CRUETS, a term applied to the vessels for holding the water and the wine used in the mass.

CUPOLA, a hemispherical vault, described on page 11.

CUSP, a projecting point formed by the meeting of two curves Fig. 77.

DOME, the term usually applied to a cupola; from the Italian, *duomo*; the German word *Dom* is applied to a cathedral.

ENTABLATURE, the part above the columns, including the architrave, frieze, and cornice.

ENTASIS, the swelling out of the middle of a column.

EXTRADOS, "the exterior curve of an arch."

FASCIA, a band or fillet.

FILLET, a small band between mouldings.
FINIAL, the flower or foliage terminating a pinnacle.
FLUTINGS, channels cut in columns.
FOLIATION, "an arrangement of small arcs separated by cusps."
FONT, described page 184. In early times the mother-churches alone had fonts, from which, Coke said, that the right of motherhood should be decided by the possession of a font.
FRONTAL, the hanging panel in front of an altar.

GROIN, "the edge formed by an intersection of vaults."
GURGOYLE, a projecting spout.
GYNÆCEUM, the part of a Greek house appointed for females.

IMPOST, the point of junction between the arch and the pier.
INTRADOS, the inner surface of an arch.

JAMB, the side of a window, door, &c.

KEY-STONE, the central stone at the top of an arch or vault.

LECTURN, a reading-desk from which the lessons are read; *vide* Reading-desk (Fig. 152). In Scotland, the precentor's desk is sometimes called lecturn or lettern; the German *lettern* is applied to the screen between the choir and nave (*vide* page 22).
LINTEL, a horizontal piece of wood or stone over a doorway.

MISERICORDIA, or MISERERE, the small support mentioned at page 214.
MONSTRANCE, a vessel for exposing to view the consecrated host (Fig. 114).
MULLION, the stone piers between the lights of a window.

NICHE, a recess for a statue.

OGEE, a form of moulding where the convex and the concave are combined.
—— Arch (Fig. 83*a*), not to be confounded with *Ogive*, which is the French term for Gothic.
OVOLO, a convex moulding.

PENDENTIVE, a small niche used in the preparation of a cupola, to fill up the opening made from the transition of the square base into the round dome.
PIER, sometimes called PILLAR, an isolated mass of masonry used for the support of arches, &c.; for description, *vide* page 27.
PILASTER, a square pier set in a wall, and slightly projecting.
PINNACLE, "a small spire generally ornamented," consisting of a shaft and roof, with finial.
PISCINA, a basin generally built in the wall, and connected with a drain, in which the priest washes his hands and the sacred vessels, formerly the basin in the baptistery (page 184).

PULPIT (from the Latin, *pulpitum*), a desk or stand for preaching in. In mediæval documents, it is sometimes applied to the rood-screen, from which, as railings (*cancelli*), is derived the German name *Kanzel.*

PYX, or PIX (πυξίς), a small box (generally of gold) used for holding the mass before the introduction of the monstrance; it is now used for the box in which it is taken to the sick, but sometimes applied to the small vessel in the monstrance on which the wafer rests.

REREDOS, the back wall above the altar.

RESPOND, a half pillar or pier, attached to a wall, for the support of a vault.

ROOD-SCREEN, or LOFT, the screen between the choir and the nave, so called from its having originally a large cross or *rood* above it; it has often been made into an organ loft.

SCONTIONS, the inner thickness of wall at the sides of doors and of windows.

SCREEN, the name generally given to the choir railing.

SEDILIA (seats), a name generally given to the seats on the south side of the choir (page 221). In this country they are usually of masonry, and recessed in the wall.

SHRINE, a box or case in which relics are deposited; the term is also applied to sacred places.

SILL, the foundation, applied to the wood or stone at the foot of a door or window.

SOCLE, a plain block, forming a low base to a column; also a plain face at the lower part of a wall.

STALL (probably from the Italian *stallo*, or the Gothic *stôls*), a fixed seat enclosed at the back and sides, wholly or partially.

THRUST, a technical term for the pressure, by the roof or vault, on the walls, from its tendency to force them outwards, unless resisted.

TORUS, a semicircular moulding at the foot of columns.

TRACERY, the term for the ramifications of the mullions in Gothic windows forming geometrical and other figures.

TRANSOM, a horizontal mullion in windows, much used in the perpendicular Gothic.

TRAPEZE (Gr. τραπέζιον), an irregular four-sided figure (Fig. 10).

TRIFORIUM, the gallery opening into the nave between the arcade arches and the upper windows, so called from its usual opening being three arches together (page 70).

TUFA, a porous stone, used principally for vaults on account of its lightness.

TYMPANUM, the triangular area in a pediment; also the panel above a door.

VESICA (a bladder), a name given by Albert Durer to a pointed oval figure, which occurs often in old mosaics. It is also applied to a Flamboyant, or Fish-bladder window (Fig. 82).

VOLUTA, a scroll used in Ionic and Composite capitals.

INDEX.

AACHEN, *vide* Aix-la-Chapelle.
Acolytes, lights of, 181.
Adalbert, Archbishop, 198.
Adalbert, St, 254.
Admont collegiate church, portable altar, 136.
Adrian, Pope, 171.
Aisles, double in larger basilicas, 4, 9.
——— often in Germany, 72, 73.
Single, in England, 271.
Aix-la-Chapelle minster, 11.
Ambon (of Henry II.), 204.
Baptistery, 185.
Capitals, 31.
Chandelier, 172.
Charlemagne's chest, 166.
——— head, 170.
——— marble seat, 221.
——— tomb, 192.
Crucifixes in treasury, 159.
Cupola, 11.
Doors, 253.
Holy-water basin, 153.
Mary's chest, 166.
Mosaics, 228.
Organ, 208.
Reading-desk, 208.
As an example of second Gothic period, 83.
Alcala de Henares, organ, 211.
Alpais, ciborium, 146.
ALTAR, 115.
In early times, 23, 120.
Romanesque, decorated by goldsmiths, 129.
Gothic, stone and wood-carving, 129.
Shape and materials, 116.
Hollow, 118.
Gospel and Epistle side of, 120.
Covering, 121.
Furnishing, 124, 137.
Altar—*continued*.
Several in one building, 118.
Contain relics, 120.
High, predominance, 120.
——— dedicated to the Madonna, 133.
——— with shrines, and carved with diptychs, &c., 130.
Side, 121.
For the laity, and dedication to the Holy Cross, &c., 121.
With diptychs, 136.
Wall, 125.
With retabulum, 126.
With ciborium, &c., 128.
Portable, 135.
Relic, 129.
Position of priest, 120, 126.
Altenberg cloister church, choir, 71, 72.
——— first epoch of Gothic, 81.
——— nave, second epoch of Gothic, 83.
——— monastery, 106.
——— grisailles, 236.
——— monuments, 199.
——— stalls, 221.
Althof chapel, tile pavements, 240.
Ambon, 22, 202, 204.
Amiens cathedral doorway, 245.
Ammersleben cloister church pavements, 240.
Andernach, gallery in church, 19.
Angermünde, St Mary's font, 189.
Antependia, 122.
Antiphonarium, 149.
Antony, St, founder of monastery, 102.
Apengheter, J., 178.
Apse in Romanesque, 2, 12, 23, 62.
In Norman building exceptional, 266.
Arcade moulding, 12, 35.
Arch, Triumphal, the place for decoration, 7

Arch, Triumphal—*continued.*
——— its position in Romanesque buildings, 21.
Pointed, introduction of, and description, 49.
——— equilateral, 50.
——— causes of its adoption, 53, 268.
——— important for the construction of a vault, 54.
——— in the transept, nave, and aisles, while the round arch is in the eastern parts of the choir, 55.
——— arched vault, with round arch arcades, 55.
——— importance of, in Gothic art, 67, 268.
Intrados ornamented, 55.
Horse-shoe and notched, 59.
Ogee, 90.
Trefoil, 59.
Tudor, 90, 274.
Used in the vaulting of brick-buildings, 96.
Arcade arches in brick-building, 98.
Arcosolia, 116, 119.
Arms of saints, 170.
Arndsee cloister church, vaulting, &c., 94, 96.
Attic base, 28.
Inverted, used as a capital, 33.
Augsburg Baptistery, 184.
Cathedral, doors, 254.
——— glass-painting, 234.
——— sculptured doorway, 247.
——— stalls, 218.
Augustine, 204.
Augustine's rule, monasterial arrangements, 104.
Auriol, altar, 117.
Autun cathedral, barrel vault in nave, 44.
Azelins, Bishop, 172.

BALDACHIN over altars, 124.
Behind altars, 128.
Balustrades, 21.
Balve church sculpture on tympanum, 243.
Bamberg cathedral, 65.
——— example of second choir, &c., 26.
——— altar in treasury, 136.
——— burial places, 193, 199.
——— cross (ivory), 159.
——— doorways, 244.
——— missal, 151.
——— monuments, 200.
——— screens, 203.
——— slabs erect, 195.
——— tomb of Bishop Suitger, 197.
——— tomb of Henry II., 198.
Bamberg—*continued.*
St Gangolf candlestick, 177.
Parish church, north doorway, 249.
Baptisteries, 184.
Barbarossa, Fred., 172.
Bartfeld parish church altar, 134.
BASILICAS—
The ancient hall of exchange, 1.
Model adopted by Christian architects, 2.
Interior arrangements, 4.
——— decoration, 7.
Exterior decoration, 7.
Modified in Byzantium to suit Oriental manners, 10.
Description of one as developed in Romanesque architecture, 17.
Meaning of the name, 17.
First vaulted about the twelfth century, 47.
Bases, *vide* Attics and Capitals.
Bâsle Minster—
——— antependium, 123.
——— organ, 211.
——— pulpit, 207.
——— screen, 203.
——— sculpture on gallery door, 243.
——— tombs, 197.
Churchyard, dance of death, 232.
Museum, chalice, 141.
Baumburg near Kreuznach, burgh chapel sounding vessels, 253.
Beaune hospital, 112.
Bebenhausen cloister church (Cistercian), 105.
Two refectories in monastery, 107.
Beckum church reliquaries, 166.
BELLS first used, Roman, 255.
Gothic, 256.
Benedictines' first monastery, 102.
Their church arrangements, 86.
Sites chosen for their monasteries, 107.
Benedictionarium, 149.
Bénitier, 153.
Berchtesgaden church font, 188.
Berghausen church manile, 154.
Berlin art chamber and new museum—
——— portable altar, 136.
——— pyxes, 144.
Cloister church, specimen of brick building, 100.
Mary's church, dance of death, 232.
Nicolai church chalice, 141.
Royal library bindings, 151.
Bernard's, St, chalice, 142.
Berne minster, reading-desk, 208.
——— stalls, 221.
Churchyard, dance of death, 232.
Bernhard of Clairvaux, 239.
——— Bishop, 141.
Bernward, Bishop, cross, 161.

Bernward, Bishop—*continued.*
——— doors, 253.
——— missal, 151.
——— paten, 144.
Beverley minster, 272.
Biblia pauperum, 245.
Billerbeck, St John's—
Stone candlesticks, 179.
Font, 187.
Bindings, 150.
Bishops' seats, 104.
Blaubeuren cloister church, relics—
Predella, 130.
High altar, 133.
Bocholt church, monstrance, 149.
Bochum church, chest, 167.
Boisserée, 268.
Bonn minster, 65.
——— grave-stones in crypt, 193.
Boppart church stalls, 218.
Borken parish church, sedilia, 221.
Botzen, churchyard lantern, 261.
Bourges cathedral, glass-painting, 234.
Bowtels, 80.
Brandenburg—
St Catharine's, font, 190.
Specimen of ornamented gables in brick-building, 100.
Specimen of hall church in brick, 101.
St Godehard, font, 188.
Brasses, 198.
Brauweiler, apse of church, wall-painting, 232.
Chapter-house paintings, 230.
Breadth of German cathedrals, 268.
Brechten church, font, 186.
Breisach minster, altar, 134.
Bremen cathedral, font, 188.
Brenken church, font, 186.
——— pulpit, 205.
Breslau cathedral, wall-painting, 232.
Corpus Christi, altar, 135.
Elizabeth church, shrine, 224.
——— altar, 120, 135.
Magdalene church, sculpture on door, 243.
——— altar, 135.
Vincenz church, monument of Duke Henry II., 197.
BRICK-BUILDING—
German, 93.
Romanesque capitals of piers, 94.
Ornamentation, 95.
Towers, &c., 96.
Time of duration, 96.
Gothic, with low aisles, choir, chapel, &c., 96.
——— exterior, 98.
——— doorways, 99.
——— gables, &c., 100.
Brick-building—*continued.*
Gothic, the most important brick churches, 100.
Brixen cathedral, baptistery, 185.
——— monstrance, 149.
Brothers of the Holy Spirit, 109.
Bruges cathedral, monuments, 199.
St John's hospital, Ursula chest, 168.
Brüggemann, Hans, 135.
Brunn, St Augustine's candlestick, 179.
Brunswick Cathedral—
Vaulting, 48.
Nave with four side aisles (later), 72.
Altar of Henry the Lion, 117.
Candlestick, 176.
Tombs, 192, 197.
Wall-paintings, 230.
Bültink, Gert, 174.
Burgen, double chapel, 43.
Busts of wood, 169.
Buttress, flying buttress, &c., 68, 72, 74, 273.
Description of pilaster buttress, 68, 74, 273.
Butzow collegiate church, organ, 211.
BYZANTINE STYLE, 10.
Details based on ancient models, 13.
Decoration of the interiors, 15.
Byzantium, *vide* Constantinople.

CALAMUS, 138.
Calcar collegiate church, specimen of a hall church in brick, 101.
Cloister church, altar, 134.
——— shrine, 224.
——— stalls, 218.
——— chandelier, 174.
Cambridge library, psalter, 210.
King's College, 274.
Campana, 255.
Candelabra, 175.
Stone, 179.
CANDLESTICKS, 175, 179.
Before the altar, 124, 179.
On altar, 180.
Canterbury cathedral, first Gothic building, 67.
Norman, 267.
Capitals, Corinthian, 5.
Composite, 5.
Ionic, 6.
Byzantine, 13.
Cushion, 31.
Bell-shaped and cup-shaped, &c., 33.
For determinating times of, 33.
And bases in Transition period, 61.
Gothic period, vase-shaped, 73.
Ornamentation compared with Romanesque, 73.

Capitals—*continued.*
Of piers and columns in brick-buildings, 94, 97.
And bases (English) of rings, 272.
Foliage (English), 273.
Cappenburg, in Westphalia, abbey of, 107.
Carden collegiate church, shrine of St Castor, 168.
Carpets, painted, 238.
Carthusians' monasterial arrangements, 108.
Catacombs, place of worship, 1.
Altars in, 116, 119.
Ceiling, wooden, 20.
Painted, in Hildesheim, 231.
Cenotaph, 201.
Censers, 151.
Gothic, 152.
Cereostati, 175.
CHALICES, 137.
Travelling and funeral, 139.
Late Romanesque, 141.
Gothic, 141.
CHANDELIERS, &c.—
Placed before the presbyterium, 171.
Romanesque, 172.
In Gothic period, 173.
Chapels, double, 43.
With cupola, 43.
Crown of, round choir, 72, 90.
Gothic brick-building, 96.
Chapter-houses, 103, 277.
Charlemagne, 11, 163, 192, 221, 228, 246, 253.
Chartres cathedral, 268.
——— doorway, 245.
——— glass-painting, 234.
——— labyrinth, 240.
Chemins de Jérusalem, 240.
Chests, wooden, for decorations, 226.
Vide Shrines.
Chichester cathedral, 271.
Chillon, castle, stall, 216.
Choir in Romanesque building, 21, 22.
In Gothic building, 71, 72.
Raised and altered in shape, 71.
Termination various, 84.
Arrangement in Benedictine Cistercian churches, 86.
In third Gothic period, 90.
In Gothic brick churches, 96.
Long as nave, in English cathedrals, with rectangular termination, 270.
Railings, 202.
——— first covered with statuary, 241.
Chorin Cistercian church, specimen of brick-building, 100.
Christoph, Martin, 187.
Chrysostom, 204.
Chur cathedral, high altar, 134.
Churches, village, 42.
CHURCHYARD LIGHTS, 260.
CIBORIUMS, 144.
Over altars, 124.
Behind altars, 128.
Altar-baldachins, 145.
Cilli, small ornamental shrines, 225.
Cistercians' church arrangements, 86, 105.
Monasterial do., 105, 106.
Grisailles, 236.
Classe, St Apollinare, mosaics, 228.
Clement II., Pope, 197.
Clermont Notre Dame, barrel vault in nave, 44.
Cleve collegiate church, specimen of brick-building, 100.
Cloister church, stalls, 218.
CLOCKS, 251.
Introduced, 251.
With mechanism for amusement, 252.
Cloisters, 102.
Coblenz Madonna church, gallery, 19.
Coburg, double chapel, 44.
Coesfeld Lambert church, sedilia, 221.
Colberg Mary church, specimen of hall churches in brick, 101.
——— candlestick, 178.
——— painted vault, 231.
Colmar minster, 83, 108.
Churchyard, Mount of Calvary, 259.
Cologne Archiepiscopal museum, altars, 137.
——— bell of sheet iron, 253.
——— altar candlesticks, 181.
——— censer, 152.
Cathedral commenced, 67.
——— first Gothic epoch, 81.
——— choir, 71.
——— choir corridors, &c., 72.
——— glass-painting, 236, 237.
——— monstrance, 149
——— shrines, 166.
——— stalls, 218.
——— sculpture, 246.
——— south doorway, 248.
——— tapestry, 214.
——— tombs, 198, 201.
——— towers, 77.
——— wall-painting, 232.
Apostles' church, 65.
——— chalice, 141.
St Alban's, censer, 152.
St Andrew's, Maccabees chest, 167.
——— notched arch, 60.
Cecilia church, 255.
Church of the Capitol, grave-stone, 193.
——— St Maria, door of, 254.

Cologne—*continued.*
St Columba's, font, 190.
——— monstrance, 149.
——— candlestick, 183.
St Cunibert's, candlestick, 179.
——— glass-painting, 234.
——— Gothic wall-light, 182.
——— reliquary head, 170.
St George's, font, 186.
St Gereon, nave first Gothic building in Germany, 67, 81.
——— altar, 117.
——— baptistery, 185.
——— wall-painting, 230.
——— candlestick, 183.
——— lions at the doorway, 39.
——— pavements, 239.
——— pyx, 144.
——— spring, 185.
——— windows, 57.
St John's, ciborium, 146.
——— wooden reliquary, 168.
St Martin's, 65.
——— ciborium, 146.
——— font, 186.
St Mary's, twelve reliquary-chests, 166.
St Severin's, chest, 166.
——— labyrinth, 241.
St Ursula, gallery, 19.
——— altar, 130.
——— antipendium, 123.
——— chest, 166.
Columns, description of, 27.
Difference between, and piers, 27.
Doorways, 39.
Half-columns, &c., 35.
In piers, 34, 271.
Omitted in brick-building, 93.
Comburg abbey, near Hall in Swabia, best existing example of monasterial arrangement, 104.
Abbey church, antipendium, 123.
——— chandelier, 172.
Chapter-house, praying-desk, 208.
Minster nave, second Gothic epoch, 83.
Dominican church, 108.
Churchyard, Mount of Calvary, 259.
Conrad of Hochstaden, 201.
Conrad II., 192.
Constance minster, carved door, 255.
——— Easter sepulchre, 250.
——— stalls, 218.
St Stephen, stalls, 218.
Constantine, 1, 8, 10, 156.
Constantinople, the place where Byzantine architecture originated, 10.
St Sophia, cupola, 11.
——— best example of Byzantine art, 15.
——— altar adorned with stone, 116.
Constantinople—*continued.*
St Sophia, mosaics, 228.
St Sergius and Bacchus, cupola, 11.
Theotokos, having four cupolas, 15.
Cornice mouldings, 60.
Corona, 171.
Cracow Lady church, high altar, 134.
Crailsheim church, shrine, 224.
Creglingen Pilgrimage church, altar, 133.
Pulpit, 207.
Crocket, 75.
Cross, early basilicas in form of Latin, 4.
St Mark's, first in the form of the Greek, 15.
Crosses, 156.
First use and form, 156.
Borne in procession, 157.
Place in churches, 157.
Romanesque material, &c., 157.
Relic crosses, 158.
Gothic, 159.
Crystal, 168.
Crucifix above the altar for the laity, 121.
On the altar, 124, 157.
In procession, 159.
Cruets, 153.
Crypts, Romanesque, 24, 25.
Disappear in Gothic building, 71.
Springs, 190.
Crystal flasks and crosses, 168.
Cues, on the Moselle, hospital, 112.
Cupola, the fundamental principle of Byzantine architecture, 10.
Used previously in Rome, 11.
Construction of cupola, 11.
Not a conclusive evidence of Byzantine art, 12.
In Romanesque buildings, 43.
Raised over the centre of the transept, 49.
Cusps, 83.

Dalmeny apse, 266.
Dance of Death, 231.
Danzig Greyfriars church, stalls, 221.
Mary's church, clock, 252.
——— specimen of hall church of brick, 101.
——— altar, 117, 135.
Minorite church, 108.
Darmstadt library, bindings, 151.
Decorated style, 273.
Decoration, painted and sculptured, 227.
Frescoes, 222.
Wall-painting, substitute for mosaics, 228.
Ceilings, 230.
Vide also Ornamentation.
Denkendorf, church of, frieze in, 35.

Deutz collegiate church, Meribert chest, 166.
Dietkirchen, Michael, 198.
Dijon Carthusian monastery, Moses' well, 108.
Dionysius, 132, 196.
Fire-gilding, 191.
Doberan [illegible] church, specimen of [illegible], 101.
——— high altar, 130, 133, 135.
Chancel church, parclose, 242.
——— sedilia, 201.
——— wooden screen, 222.
——— stalls, 218.
Dobrilugk cloister church, font setting afterwards restored, 96.
Dome, *vide* Cupola.
Dominicans' church arrangement, 76, 87.
——— Statutes of monasteries, 107.
DOORS, 253.
The oldest of bronze or brass in Romanesque times, 253.
Of carved wood, 254.
In Gothic times, 254.
Doorways in Romanesque buildings, 38.
The tympanum and ornaments on, 39.
In the Transition period, trefoil, &c., 59.
——— as at Heilsbronn, 58.
Ornamentation, &c., 61.
Pointed arched, 76.
In brick-buildings, 99.
Gables over, in Gothic, 76.
——— in Gothic brick-building, 100.
Painted and gilt, 191.
Enamel, Gothic, 277.
Sculpture at first on tympanum, 242.
——— then on the whole, 243.
——— description, 244.
Dorsalia, 237.
Dortmund, St Mary, crucifix, 121.
——— organ, 209.
——— reading-desk, 208.
——— stalls, 221.
——— wall-lights, 182.
St Peter's, font, 187.
——— altar, 135.
Reinoldi church, crucifix, 121.
——— reading-desk, 208.
——— shrine, 222, 225.
——— statues of Charlemagne and St Reinold, 246.
——— wall-lights, 182.
Roman Catholic church, ciborium, 147.
——— iron chandelier, 174.
——— brass chandelier, 174.
——— shrine, 222.
Dragon, 170.
Dresden royal library, binding, 151.
Drobilugk cloister church, 96.
Dulmen church, ciborium, 147.
Durham, Galilee, 275.
Düsseldorf Lamberti church, shrine, 224.

EADIE'S CYCLOPÆDIA, 281.
Easter sepulchre, 250.
Eberbach on the Rhine cloister church, 105.
Eberhard of the Beard praying-stall, 221.
Ebrach in Franconia cloister church, with chapels, 105.
Monastery, 106.
Ecclesius, 189.
Echternach, arrangement of arcade arches, 58.
Edwin, psalter, 209.
Eger, double chapel, 44.
Ehrenbeth collegiate church, stall, 218.
Ellenberg church, censer, 152.
Ely, Galilee, 275.
Emmerich, Martin's, church stalls, 218.
Encolpia, 162.
Engelbert of the Mark, tomb, 198.
Enger church, tomb of Duke Wittekind, 197.
English, early, 273.
Enkenbach church, chandelier, 174.
Erfurt cathedral, third epoch, 91.
——— monuments, 199.
——— peristerium, 145.
——— stall, 218.
Preachers' church, first Gothic epoch, 81.
Ernest, Archbishop, 201.
Esser, baptistery, 185.
Collegiate church, crosses, 159.
Treasury of collegiate church, bindings, 151.
St John's, high altar, 130.
Minster, candlestick, 175.
——— monstrance, 149.
——— sword in treasury, 170.
Esslingen, Dionysius, church shrine, 224.
Church of our Lady, specimen of late Gothic hall church, 91.
——— sculpture on doorway in hall, 247.
——— statues on buttress, 249.
Eucharist, 144, 145.
Evangelarium, 149.
Ewald Brothers, 135.
Extrados of the vault, 47.

FAÇADE, 39, 100.
Fasting-cloths, 231.
Fauvettes, frieze in church of, 35.
Fest, &c., 170.
Fergusson's Handbook, 270, 277.
Fischbeck monastery, reliquary head, 170.
Fistula, 138.

Flamboyant, 214.
FONTS, 184.
Place, 185.
Romanesque, 186.
Gothic, 187.
Formulæ, 212.
Fountain at the entrance of churches, 4.
Franciscans' church arrangements, 78, 87.
Sites of monasteries, 107.
Frankfurt-on-Maine—
Cathedral, example of, second Gothic period, 83.
——— tower, specimen of, third Gothic period, 91.
——— choir-stalls, 218.
——— Mount of Calvary, 259.
Library, binding, 151.
Frankfurt-on-the-Oder, candlestick, 178.
Freckenhorst church, font, 186.
——— shrine, 225.
Frederick, Bishop of Münster, 139.
Frederick II., Archbishop, 198.
Frederick III., tomb, 198.
——— Barbarossa, 172.
Freiberg in the Harz, pulpit, 207.
——— golden door, 244.
Freiburg in the Breisgau, minster, 65.
——— transept, 65.
——— choir corridors, 72.
——— one tower, 77.
——— first Gothic period, 81.
——— third Gothic period, 91.
——— glass-painting, 236.
——— pulpit, 207.
——— sculpture in nave, 246.
——— on the exterior, 247.
——— well, 192.
Double chapel, 44.
On the Unstrut, notched arch, 60.
Freising cathedral, monstrance, 149.
——— sculpture on columns in crypt, 242.
Museum, altar candlestick, 181.
——— censer, 152.
Freistadt, lights for the dead, 261.
Fresco, compared with wall-painting, 229.
Friedberg Madonna church, font, 187.
Friezes above the arcade arches—
Bands of interlaced work, &c., 35.
Round arch, 36, 37.
Additional, 38.
Round arch frieze arranged to produce a pointed one, 61, 268.
Arch frieze in brick-building, 95, 99.
Diamond-shaped, 95.
Of terra cotta in brick-building, 99.
Fritzlar cathedral, choir stall, 217.
Fröndenberg church, chandelier, 174.
Fulda Abbey church, bells, 154.
Fürsten church, Romanesque wall lights, 182.
Fürstenwalde church, shrine, 224.
Gable pointed, 76.
In brick-building, 100.

GALILEE, 275.
Galleries in Byzantine basilicas, gynæceum, 10, 11.
In Romanesque basilicas, 19, 38.
Or *loggia*, 26.
Over the side aisle and in the upper wall of the nave, 63, 64, 70.
Gandersheim collegiate church, 48.
Gebweiler, specimen of vaulting, 49.
Dominican church, 108.
Gelnhausen church, 65.
Gerardus, Master, 188.
Gerbert, Abbot, 251.
Gernrode collegiate church, 26, 27.
Plan, 22.
Gerona cathedral, wheel of bells, 154.
GLASS-PAINTING—
Tapestry character, 74, 232.
Style, &c., 233.
Properly resembling glass mosaics, not oil-paintings, 233.
Gothic, 234.
Windows in St Martha's, Nüremberg, 236.
Became as oil-paintings, 237.
Gmünd Church of Holy Cross—
Altar, 134.
Sculptured doorways, 247.
Statues on buttresses and ornamented gurgoyles, 249.
Easter sepulchre, 251.
Gnesen cathedral, brass door, 254.
Göllingen, horse-shoe arch in crypt, 59.
Görlitz, St Peter and St Paul, nave and four aisles without transept, 72.
Hall church, late Gothic, 91.
Spring, 190.
Goslar cathedral, the Krodo altar, 118.
Double chapel, 44.
Neuwerk's church, pulpit, 206.
Gotha library, bindings, 151.
GOTHIC STYLE—
Reason of name, 66.
When first appeared in France, 66.
——— in England, 67, 270.
——— in the Rhine, 67.
Its chief tendency, 67.
Use of buttresses, &c., 68, 74.
Alteration of ground-plan of buildings, 69, 71.
Nave with four aisles, rows of chapels, &c., 72, 73.
Supporting system then necessary, 73
Doorways with pointed gables, 76.

Gothic style—*continued.*
Arrangement of towers and pinnacles, 77.
Nave and side aisles of equal height, 77.
FIRST EPOCH, 78.
——— windows, 79.
——— piers, 79, 80.
——— vault-ribs, 80.
——— ornamentation, 81.
SECOND EPOCH, 82.
——— alteration of contours in window tracery, &c., 82.
THIRD EPOCH, 87.
——— freer spacing of piers, &c., 88.
——— richest examples decorative in tabernacles, &c., 91.
Styles compared, 268.
——— in England, 273.
Göttweih monastery, peristerium, 145.
Grado cathedral, stalls, 212.
Grave-stones, 193.
Graves of the martyrs, 116.
Greifswald Mary church, specimen of a hall church of brick, 101.
Altar, 135.
Griffe, 272.
Grisailles, 236.
Gröningen church, stucco sculpture on galleries, 242.
Groven, Laurence, 189.
Gruden, Nicholas, 224.
Gurgoyles, 69, 249.
Gurk cathedral, altar, 117.
——— wall-paintings, 230.
Gynæceum, 10.

HAIDER, SYMON, 255.
Hagenau, George's church, shrine, 224.
Hal in Belgium, Madonna church, font with crane, 190.
Halberstadt—
Cathedral, first Gothic epoch, 81.
——— bindings, 150.
——— candlestick, 179.
——— choir corridors, 72.
——— screen, 204.
——— tapestry, 214, 238.
Our Lady's church altar, with ciborium, 124.
——— candlestick, 179.
——— screen, 203.
Hall churches—
In Transition style, 65.
Nave and aisles of equal height, 77, 83.
High roof, &c., 84.
First Gothic, 85.
Common in Germany, but rare in France or England, 86.
Their advantages, &c., 86.
In third Gothic period, 90, 91.
Hall churches—*continued.*
In Gothic brick, 36.
West ingenuan brick, 101.
Hall in Tyrol—
St Michael, carved altars, 254.
——— Mount of Olives, 259.
——— shrine, 224.
In Tyrol, monstrance, 249.
Halle church, stalls, 211.
Mary church, altar, 133.
Nevmarket church, altar, 135.
Ulrich church, altar, 136.
Halter wax model, altar, 134.
Hamburg church, panting, 231.
Hamelmann, monstrance, ciborium, 124.
——— sculpture of lions on tympanum, 245.
——— screen, 205.
Hanover Church of the Cross, font, 190.
Market church, stone, 74.
Royal treasury, altar, 136.
Hardberg church, 43.
Harzelberg Lutheran—
Specimen of brick-building, 100.
Stone candlestick, 179.
Grave-stone, 194.
Screen, 205.
Hasselhorst church, sacramental, 142.
Heilbronn Kilian church, altar, 134.
——— shrine, 224.
Meinrad's church a Roman Catholic church, altars in, 128.
Heiligenstadt—
Dorotea church, shrine, 224.
——— relic, 158.
——— view of, 62.
——— ornamentation of, 61.
Heiligenstadt, see *Mount, holy cross.*
Heimerman church, Osterman, 65, 105.
Hemmenhof church, glass-painting, 234.
Hennenberg church, origin of the pointed arch there, 55.
Henry the Lion, 36, 111, 177, 192, 197.
Henry II., Duke, 256.
Emperor, 107, 151, 198.
Herford church, 102.
John's church, mantle, 154.
——— glass-painting, 235.
——— monuments, 186.
St Mary altar tabernacle, 129.
Minster, 65.
——— font, 187.
Hermannsberg Collegiate Church—
Altar, 135.
Pulpit, 207.
Screen, 205.
Hersbruck church, Mount of Olives, 259.
Hexham, 104.
Hezelo, Bishop, 140.

Hilarius, 128.
Hildesheim Cathedral—
Chalice, 140-142.
Chandelier, 172.
Cross, 160.
Doors, 253.
St Epiphanius' chest, 166.
Godehard's chest, 166.
Font, 188.
Missals, 151.
Mosaics, 239.
Reliquary head, 170.
Stone candelabra, 179.
St Godehard, chalice, 141.
——— corridors round the choir, 24.
——— monstrance, 149.
——— paten, 144.
——— sculpture on tympanum, 243.
——— plan, 25.
——— second crypt, 26.
St Laurent, mosaics, 239.
St Michael, balustrade, 21.
——— galleries in transept, 26.
——— painted ceiling, 231.
——— screens, 203.
——— second crypt, 26.
——— stucco-relief on the walls, 242.
Holbein, 211.
Holy-water basins, 4, 135.
Host boxes, 153.

Idensee church bell, 256.
Impost, 41.
Incense-cups, 151.
Infirmaries, 103, 109, 111.
Innocent III., 109.
Innspruck, tomb of Emperor Maximilian, 201.
Intrados of the vault, 47.
Of the arch, 55.
Ivenack cloister church, stalls, 216.
Iserlohn church, sedilia, 221.

Jerichow Cloister Church—
Piers in, 93.
Flat ceiling, 96.
Jerusalem, mortuary church of St Helena, altars in, 116.
Church of Holy Sepulchre, altars, 119.
Imitations of Holy Sepulchre, 250.
Jesse, root of, 231.
Jüterbog church, ciborium, 147.
Jüterbogk, Nicolai church, font, 187.

Kaiserswerth church, Suibertus' chest, 166.
Kammin cathedral, pointed arch in vaulting, 96.
Kappel in Switzerland, cloister church, 105.
Kappel in Switzerland—*continued.*
——— stalls, 215.
Kappenberg cloister church, stalls, 218.
——— shrines, 222.
Karl, *vide* Charlemagne.
Karlstein, Burg, chapel, wall-painting, 232.
Kaschau, Elizabeth church, altars, 134.
Kelso abbey, piers, &c., 268.
Kempen church, chandelier, 174.
——— stalls, 218.
Kirchlinde church, sacristy altar, 136.
Kissing-tables, 169.
Klosterneuberg church, altar panel, 126.
——— candlestick, 177.
——— churchyard lights, 261.
Knights of the Teutonic Order, 109.
Koesfeld, St James', font, 186.
Mount of Calvary, 259.
Kolberg, Mary church, altar, 135.
Kolin, St Bartholomew's—
Shape of choir, 72.
Choir of second Gothic period, 83.
Köln, *vide* Cologne.
Königsfelden cloister church, glass-painting, 236.
——— pavements, 240.
Königsgrätz cathedral, shrine, 224.
Königslutter—
Abbey church, side chapels, 23.
——— plan of, 24.
——— lions at the doorway, 39.
Collegiate church, candlestick, 179.
——— humorous sculpture, 244.
——— tomb of Lotharius, 192.
Köslin, Mary church, altar, 135.
Krafft, Adam, 224, 251, 259.
Kremsmünster monastery, chalices, 140.
Kuttenberg in Bohemia—
Barbara church, nave and aisles second Gothic epoch, 83.
——— stalls, 218.

Laach, abbey church, towers, &c., 40.
——— roofs of towers, 42.
——— vaulted, 48.
Labyrinths, 240.
Lady chapel, 270.
Landsberg, double chapel, 44.
Landshut, St Martin's, specimen of brick-building, 101.
Lausanne cathedral, reading-desk, 208.
Lectionarium, 149.
Lecturn, *vide* reading-desk.
Leipzig library, bindings, 151.
Leo III., Pope, 171, 186.
Leuchars apse, 266.
Leutschau, Jacob's church, altar, 134.
Levite seats, 221.
Lichfield cathedral, doorway, 277.

Liege, St Bartholomew's, font, 188.
Cathedral, heat of, 8. Lamberum, 172.
Liegnitz, battle of, 196.
Lights, churchyard, 260.
Lilienfeld cloister church, 24.
Limburg cathedral, font, 187.
St George's, example of Transition style, 53.
——— corridor gallery, and upper gallery of blind arcade, 64.
Lincoln cathedral, choir, 273.
——— galilee, 275.
Linz, gallery in church, 59.
Lion, 170.
Lions at the door, nothing to do with Henry the Lion, 39.
Lippstadt, Mary church, stone, 224.
Loccum, near Hanover—
Cloister church, 24, 87, 105.
——— stalls, 215.
Loggia, *vide* Gallery.
Lohra, double chapel, 44.
London, British Museum, reliquary head from Basle, 170.
Lotharius, 192.
Lübeck—
Ægidien church, chandelier, 174.
——— font, 190.
Cathedral, chandelier, 174.
——— font, 189.
——— monument, 199.
St Catharine, 102.
——— sedilia, 221.
Hospital, 111.
James' church, font, 189.
——— with brass railing, 191.
——— organ, 211.
Mary's church, specimen of brick-building, 100.
——— altar, 125.
——— bronze shrine, 224.
——— clock, 252.
——— dance of death, 252.
——— font, 189.
——— with brass railings, 190.
——— monuments, 199.
——— two organs, 211.
——— screen, 203.
——— Mount of Calvary, 259.
Lübnde, church-bell, 256.
Luzern collegiate church, font, 190.

MAESTRICHT baptistery, 185.
St Gervais', altar, 118.
——— superstructure, 126.
Magdeburg Cathedral—
——— example of Gothic, 67, 81.
——— shape of choir, 71.
——— choir corridors, 72.
——— altar, 119.
Magdeburg Cathedral—*continued.*
——— candlestick, 179.
——— monument of Archbishop Ernest, 201.
——— mural mitre, 228.
——— organ, 198.
——— screen, 77.
Madonna monasteries, 107.
Mainz, *vide* Mentz.
Malines, 254.
Mandorlas, 232.
Marburg—
St Elizabeth's, one of the first Gothic buildings, 67, 81, 85.
——— altarium, 125, 129.
——— Elizabeth's chest, 167.
——— sacristy, 238.
Marienburg castle, 109, 110.
Castle church, mosaic painting, 232.
Marienfeld monster church, 87, 105.
——— cloister, 224.
Marienmünster minster church, 72.
Marienthal Cistercian church, example of termination as a rectangular termination, &c., 24, 105.
Marienwerder cathedral, font, 187.
Martyrs, grave of, 116.
Mass-coins, 254.
Mass-book, 124.
Mastiffs as arms, 175.
Mayence—
Cloister church, 105.
——— altarium, 125.
——— screen, 22, 203.
——— sedilia, 221.
——— stalls, 208.
——— towers, &c., 87.
Monastery, 106.
Maximilian, Emperor, tomb, 201.
Mayence, *vide* Mentz.
Mayence Cathedral—
Shape of choir, 71.
Choir, first epoch of Gothic, 81.
Nave and aisles, second epoch of Gothic, 86.
Shrine, 224.
Meals, chapter-house, altar, and treasury, 176.
Meaux, Mass, 168.
Memmingen church, stalls, 218.
Mentz baptistery, 185.
Choir and nave, &c., 26.
Cathedral, enamel, 18.
——— erect grave slabs, 195.
Mensa, Lord's Table, 115, 116.
Merseburg Cathedral—
Font, 187.
Shrine, 224.
Stone and metal candelabra, 179.
Tomb of anti-Emperor Rudolph, 198.

Methelin church, font, 186.
Methler church, 65.
——— wall-paintings, 230.
Metz, monastery of the Cœlestines, account of sounding vessels, 252.
Milan—
St Ambrogio, antependium, 122.
——— mosaics, 228.
Cathedral, candlestick, 178.
——— holy-water basin, 153.
San Lorenzo, example of cupola not Byzantine, 12.
Millingen, upper, ciborium, 146.
Minden Cathedral—
Chalices, 143.
Nave of, in first Gothic epoch, 81, 85.
Reliquary, 166.
Silver crucifix, 160.
Misericordia, or miserere, 214.
Missal, 149.
Mödling chapel, 43.
Möllen candlestick, 178.
MONASTERIES, arrangement of, 102.
Monreale cathedral, mosaics, 228.
MONSTRANCES, 147.
Renaissance, 148.
Wooden, 148.
Relic, 168.
MONUMENTS, 192.
Mosaic decorations, 227.
——— example, 228.
——— at Marienburg, 232.
——— pavement, 239.
Moses' well at Dijon, 108.
Mount of Olives, 258, 259.
——— Calvary, 258, 259.
Mülhausen, Vitus' chapel, wall-painting, 232.
Mullions, 79, 82, 84.
Munich—
Church of the Madonna, specimen of brick-building, 101.
Library bindings, 151.
Museum, altar candlestick, 181.
München, *vide* Munich.
Münster—
Cathedral, 65, 104.
——— altar, high, 130.
——— brass candlestick, 180.
——— chandelier, 173.
——— churchyard light, 260.
——— cross, 159.
——— screen, *apostelgang*, 22, 204.
——— sculpture on southern doorway, 244.
——— shrine, 224.
——— shrine, small, 225.
Church of Our Lady, 86.
St Lamberti, second Gothic epoch, 86.
——— antependium, 124.
Münster—*continued.*
Ludger church, font, 187.
Mauritius church, censer, 152.
——— chalice, 139.
——— reliquary cross, 159.
——— vessel like a stand, 154.
St Michael's, Cosmas and Damianus chests, 167.
Museum, episcopal altar candlestick, 181.
——— antependia, 123.
Murbach—
Abbey church, specimen of a rectangular termination, 24.
——— specimen of vaulting, 49.

NAUMBURG Cathedral, 65.
Second crypt, 26.
Shape of east choir, 72.
Screen, 22, 203.
Nave and aisles of equal height, *vide* Hall churches.
Naviculæ, 181.
Neuberg cloister church, 24.
Monastery, chalice, 139, 143.
Ciborium, 147.
Monstrance, 149.
Neuenburg collegiate church, monument, 195.
Neuss church, candlestick, 183.
St Quirin, fan windows, 58.
——— gallery and corridors, 64.
Neuweiler, St Peter and St Paul, three altars, 118.
Nicolas of Cusa, 112.
Nola, Paulinus of, 255.
Nonnberg—
Monastery church, wall-painting, 230.
Mortuary chapel, 183.
Nördlingen, George's church, shrine, 224.
Norman style, 265.
Ornamentation, 266, 267.
Northampton, St Peter's columns and capitals, 267.
Norwich, St Stephen's, timber roof, 274.
Nossendorf church, grave-stone, 194.
Nüremberg—
Clara church, crucifix, 121.
Jacob's, altar, 134.
St John's, altar, 134.
——— churchyard, Krafft's stations, 259.
——— Holzschuher chapel, Easter sepulchres, sculptures, by Adam Krafft, 251.
Lady's church, clockwork, 252.
St Lorenz, shape of choir, 71.
——— first Gothic epoch, 81.
——— third Gothic epoch (hall church), 91.

Nuremberg—*continued.*
St Lorenz, altar, 134.
——— glass-painting, 235.
——— pyramid, 136.
——— sculptured west doorway, 247.
——— shrine, by Adam Kraft, 224.
——— tapestry, 238.
St Martha's glass-paintings, 236.
St Sebald, second shrine, &c., 26.
——— shape of choir, 71.
——— late Gothic hall church, 91.
——— altar, 134.
——— font, 191.
——— glass-painting, 235.
——— scenes from the Passion, 253.
——— sculpture, 247.
——— Sebaldinger, 166.
——— tapestry, 238.
Double chapel, 44.
Museum formerly a Carthusian monastery, 109.
——— altar, 136.
Nürnberg, *see* Nuremberg.

OELBERNLICHEN, chandelier, 174.
Oberwesel collegiate church, stalls, 218.
Oberwell church, Mount of Olives, 260.
Oberzhain timber church, sounding-vessels, 153.
Oil-vessels, 153.
Olba timber church, flat ceiling afterwards vaulted, 96.
Olivia, near Danzig, towers of Cistercian church, 105.
Oppenheim, St Catharine, first Gothic epoch, 81.
——— glass-painting, 235.
Churchyard lantern, 261.
Orca Apostolorum, 139.
Tessellatum, 239.
ORGANS, 208.
Introduced in churches, first for secular purposes then religious, 209.
Case, 210.
Ornamentation of basilicas, interior and exterior, 5.
Romanesque buildings, interior, 18.
——— exterior, 36.
In Gothic style, 62, 63.
——— English, 275.
In brick-buildings, 96.
In Norman, 267.
Vide also Decoration.
Orsoy church, veneer, 152.
Osterfeld church, roof-frame, 149.
Osnabrück cathedral, 65.
——— chandelier, 174.
——— choir, 24.
——— credence chest, 167.
——— crucifixes, 159.
Osnabrück cathedral—*continued.*
——— crucifixes of metal, 160.
——— font, 188.
——— Regina chest, 167.
——— reliquaries, 166.
Catharine church, crucifix, 121
——— chalice, 141.
——— font, 187.
St John's church, chalices, 143.
——— crucifix of metal, 160.
——— cross, 159.
Shrines, 224.

PAGES, 169.
Pacher, M., 134.
Paderborn, Bustorf church, candlestick, 177.
——— censer, 152.
——— cross-roof, 42.
Cathedral, 65.
——— altar with baldachin, 129.
——— portable altar, 136.
——— choir, 24.
——— southern doorway, 244.
——— monuments, 199.
——— spring, 191.
Churchyard light, 260.
PAINTING, 227.
In Romanesque buildings, 23, 229.
In Gothic or only for membering, &c., 74, 231.
Wall, distinguished from fresco, 229.
——— on interior of brick-buildings, 96.
Glass, 74, 232.
Vide also Mosaics and Polychromy.
Palermo Capella Palatina, mosaics, 228.
Paradies, monastery, 109.
Parenzo cathedral, mosaics, 228.
——— stalls, 212.
Parker's Glossary, 281.
Paris cathedral, doorway, 245.
Imperial library, chalice of St Remigius, 141.
Musée de Cluny, antependium, 123.
PASSION, groups representing, 257.
Place and description, 258.
PATENS, 137.
Object of, 143.
Patras, Lambert, 188.
Paulinus of Nola, 255.
PAVEMENTS, 238.
First mosaic, 239.
Tiles, 239.
Penzing, lights for the dead, 261.
Pepin, 208.
Pergulæ, 179.
Peristerium, 145.
Perleberg, St James, candlestick, 179.
Perpendicular style, 273.

Peterborough cathedral, round pier, 266.
Peyritz, 186.
Petershausen cloister church, altar, 116.
Pfaffenheim church, 65.
Phari, 171.
Pharicanthari, 171.
Piers, difference between, and columns, 27.
Description and improvement, 34
Further development, 47, 55.
In first Gothic period, 79, 80.
In second Gothic epoch, 83.
In hall churches, 84.
In third Gothic epoch, 88, 90.
In brick-building, 93, 94, 97.
In England, 271.
Pilaster, or wall-pier, 34.
Pinnacles, 75.
Pisa, Campo Santo, 193.
Piscina, 184.
Polychromy, 132, 231.
Ponziano, St, Catacombs, crosses, 156.
Porches, 4, 275.
Præmonstratenses' monasteries, 107.
Prague cathedral, shape of choir, 71.
——— choir corridors, 72.
——— examples of second Gothic period, 83.
——— foot of candlestick, 178.
——— wall-painting in choir, 232.
——— do. in the Wenzel chapel, 232.
——— chapel, 43.
Tayn and Karlshofer church, shape of choir, 72.
Tayn church, late Gothic, 91.
Praying-desks, 208.
Praying-stalls, 221.
Predella, 130.
Prenzlau Mary church, specimen of hall churches in brick, 101.
Presbyterium, 2, 22.
Probus sarcophagus, cross, 157.
Proclus, 128.
PULPITS, 204.
In Italy on columns, 206.
In Germany on a column or bracket, 207.
On the exterior, 207.
Decorative forms on, 91.
PYXES, 144.
Kept in shrines, 222.

QUEDLINBURG—
Castle church, three wooden reliquaries, 168.
Cathedral, tapestry, 214.
Collegiate church, crypts extend under the whole transept, 25.
——— tapestry, 238.
Treasury of collegiate church, binding, 151.

RATISBON—
Baptistery, 184.
Cathedral, second Gothic epoch, 83.
——— altar in the All Saints' chapel, 117.
——— altar in the St Stephen's chapel, 118.
——— churchyard lights, 260.
——— ciborium, 125.
——— glass-painting, 235.
——— Gothic cross, 160.
——— shrine, 224.
——— well, 191.
St Emmeran's chest, 167.
——— Mount of Olives, 259.
Schotten church, sculptures on doorways, 243.
Upper minsters, Mount of Olives, 259.
Rastella, 179.
Ratzeburg cathedral, chandelier, 174.
——— pointed arch in vaulting, 96.
——— stalls, 215.
Ravenna—
St Appolinare, buttresses like pilasters, and bell-towers, 7.
——— nave, mosaics, 228.
Cathedral, ambon, 204.
St Vitale, altar, 116.
——— cupola, 11.
——— mosaics, 228.
Reading-desks, 208.
Rectangular termination, 86, 270.
Regensburg, *vide* Ratisbon.
Reinold, St, statue, 246.
Relics, 162.
Veneration for, &c., 163.
Relic crosses, 158.
Monstrances, 168.
Tables, 168.
RELIQUARIES, 156, 162.
Gothic, 166.
Remigius, St, chalice, 141.
Renaissance, 92.
Responds, 272.
Retabulum, 126.
Reutlingen—
Mary's church, font, 187.
——— Easter sepulchre, 251.
——— statues on buttress, 249.
Rheims, doorway, 245.
Chalice, 141.
Rhine countries, beauty of Romanesque, 51, 63, 267.
Rhynern church, Regina chest, 167.
Riddagshausen, near Brunswick—
Cloister church, 87.
——— with chapels, 105.
Monastery, 106.
Riemenschneider, Tillman, 198, 249.
Rigefried, 167.

Rollinger, William, 221.
Romanesque style, 16.
Construction of basilicas, 17.
Interior decoration, 18.
Windows, 20.
Roofing and ceiling, 21.
Arrangement of the building, 21.
Basilicas with columns, 26.
——— with piers, 27.
Exterior decoration, 36.
Doorways, 38.
Western façade, 39.
Front of towers, 41.
Windows, roofs, &c., of towers, 41.
Village churches, 42.
Churches with cupola, 43.
Double chapels, 43.
Vaulting, 46.
Piers, 47.
Brick-building, 93.
Time of duration, 96.
Rome, St Agnese, 9.
St Alexandro, spring in crypt, 190.
St Andrew, golden corona, 171.
St Cecilia, altar in crypts, 117.
St Clement's, 9.
——— ciborium, 124.
——— stalls, 212.
St Cosmas and Damianus, mosaic, 228.
Sta Costanza, cupola, 12.
Lateran, altar of St Peter, 115.
——— seven altars, 119.
——— baptistery, 184.
——— statue of Hippolytus, 241.
St Lorenzo, 9.
——— relic cross, 162.
——— stalls, 212.
St Maria Maggiore, 9.
——— mosaics, 228.
St Paul's, 4, 7, 8.
——— mosaics, 228.
St Peter's, 8.
——— chandeliers, 171.
——— ciborium, 124.
——— grave, golden cross, 156.
——— spring in crypt, 117.
——— statue of St Peter, 241.
St Ponziano, spring in crypts, 190.
——— cross, 156.
St Prassede, 9.
——— mosaics, 228.
Stefano Rotondo, cupola, 12.
Vatican grottoes, encolpia, 162.
Roof, saddle, 41.
Cross, 41.
Pyramid-shaped, 42.
High, obviated by making three instead of one, 100.
Timber in Romanesque basilicas, 20.
——— in England, 266, 274.
Rösch, Jacob, 134.
Rosheim church, specimen of vaulting, 49.
Rosso, antique, 24.
Rostock, Mary church, specimen of brick-building, 100.
Nicolai church, 100.
——— altar, 135.
Rudolph of Swabia, 198.
Rughesee, Nicholas, 224.

Sacramentaries, 91.
Sacramentarium, 149.
Sacrament houses, 222.
——— shrines, 221.
St Denis, altar, 127, 128.
Monks of, 136.
St Gallen, abbey of, description of, 103.
——— altars, 119.
——— ambon, 204.
——— font, 185.
——— seats, 212.
Library bindings, 151.
St Graal, 209.
St Jak in Hungary, 65.
Capitals, 32.
Romanesque doorway, 243.
St Maurice abbey church—
Treasury, ciborium, 146.
——— relic-holder, 163.
Reliquary chest, 165.
St Mauritius' head, 170.
Saints, arms of, 170.
Salisbury cathedral, ground-plan, 270.
First English cathedral, 270.
Triforium, 272.
Salzburg cathedral, antependium, 124.
——— font, 189.
——— paten, 144.
——— peristerium, 145.
Capuchin church, carved doors, 255.
Hospital church, wooden reliquary, 168.
St Peter, chalice and paten, 138.
Salzwedel, St Mary church, altar, 135.
Santiago de Compostella—
Barrel vault, 44.
"Portico della gloria," 244.
Sarcophagus, 156, 163, 193, 197.
Saxon style of architecture, 265.
Schickhard, 133.
Schildesche cloister church, shrine, 224.
Schleswig cathedral, altar, 135
Schletstadt, St Fides, specimen of vaulting, 49.
Dominican church, 108.
Schöngrabern church—
Round arch friezes, 36, 37.
Fantastic ornaments in apse, 244.
Schulpforta cloister church, churchyard light, 260.

Schwabach church, altar, 134.
——— shrine, 224.
Schwarz-Reindorf church, font, 186.
Double chapel, 44.
Lower church, wall-paintings, 230.
Schwerin cathedral, specimen of brick-building, 100.
Monuments, 199.
Schwerte church, altar, 135.
——— brass candlestick, 180.
Sconce, 179.
SCRERN, 22, 91, 202.
SCULPTURE—
Earliest specimens first used, 241.
In Germany behind France, 245.
In the interior, 246.
In the exterior of apse, 244.
Subject, &c., 245.
Seckau, brass chandelier, 175.
Sedilia, 221.
Sedletz castle, monstrance, 149.
Sepulchres, Easter, 250.
Seitenstetten, censer, 152.
Shepherd, Good, statuettes, 241.
Ships, reliquaries, 170.
SHRINES—
With relics, 130.
Supported by statuettes, 168.
Sacrament, position and origin, 222.
Of wood and of bronze, 224.
Small, in southern choir wall, 224.
Siegburg parish church, reliquaries, 166.
Siegen, St Martin's church, bell, 257.
Singing-desk, 208, 221.
Sinzig, gallery in church, 19.
Sitten, Notre Dame de Valère, 203.
——— wooden chest, 226.
Soest cathedral, crucifix, 121.
——— font, 187.
——— Patroclus chest, 167.
——— sculpture or tympanum, 243.
——— wall-paintings, 230.
Meadow church (St Maria), shape of choir, 71.
——— hall church, 91.
——— altar baldachin, 129.
——— antependia, 123.
——— candlestick, 179.
——— font, 187.
——— glass-painting, 237.
——— three tabernacles, 225.
Nicolai chapel, wall-paintings, 230.
St Paul's, font, 187.
St Pèter's, font, 187.
——— pulpit, 205.
Thomas church, wall-painting, 232.
——— font, 187.
Walpurgis church, painted antependium, 123.
Soltykoff collection, cross, 159.
Romanesque shrine, 165.
SOUNDING VESSELS, 252.
Speyer, *vide* Spires.
Spire, 42, 271.
Spires cathedral, vaulted, 48.
Ground-plan, 48.
Baptistery, 184.
Tomb of Conrad II., 192.
Springs, 190.
Spur ornament, 28, 29, 272.
STALLS, 212.
Ornamentation and sculpture, 214.
Perfection, 217.
Praying-stalls, 221.
Stations, 258.
Statuettes, reliquary, 170.
Steinbach shrines, 222.
Steinfurt, double chapel, 44.
Stone slabs, 193.
Stoss, Veit, 134.
Stralsund, Nicolai and Mary churches, specimen of brick-building, 100.
Altar, 135.
Monument, 199.
Strasburg, baptistery, 184.
Minster clock, 252.
——— decoration of exterior, 246.
——— glass-painting, 235.
——— middle pier in transept with sculpture, 246.
——— nave in first Gothic epoch, 81.
——— organ, 209.
——— pulpit, 207.
——— towers, 77.
——— well, 192.
Stromberg, churchyard light, 260.
Stucco used for sculpture on screens and galleries, &c., 242.
Stuttgardt collegiate church—
——— pulpit, 207.
——— sculpture on door, 248.
Hospital church, stalls, 218.
Leonhard's church, Mount of Calvary, 259.
Suitgen, Bishop, 198.
Superfrontale, 126.
Suspensio, 145, 222.
Sword, 170.
Sylvester, Pope, 175.
II., Pope, 251.
Synagogue represented in sculpture, 244.
Syrlin, Jörg, 208, 218.

TABERNACLES, 91, 221, 222.
TAPESTRY, 237, 238.
Tassilo, Duke, 140.
Tegernsee, monstrance, 149.
Thaun minster, doorway, 248.
Thorn, St John's church, 199.

Tiles, 239.
Tischnowitz cloister church, 65.
  Romanesque doorways, 243.
Tiurel, 269.
Tombs—
  Stone slabs, 193.
  With engraved representation, 194.
  Relief sunk, 195.
  Raised, 197.
  Brass or bronze, 198.
Torch ornament, 273.
Tornello cathedral, stalls, 212.
Toulouse, St Sernin, barrel vault, 44.
Towers in Romanesque building, 39–41.
  Gothic, 77.
  Brick-building, 96.
  On the intersection, 41, 49, 271.
  At Laach, 41.
  At Strasburg, 77.
  At the western façade, 39, 77, 96, 268.
Transept, rare, third Gothic period, 90.
TRANSITION PERIOD, 51.
  Not to be considered as a style like the Romanesque or Gothic, 52.
  Adopts the pointed arch in the interior, retaining the round arch on the exterior, 52.
  Remodelling of the vault, 54.
  Ornamentation of the arch and piers, 55.
  Construction of vaults, 55.
  Of the windows, 56, 57.
  Doorways, 59.
  Modification of the capitals and bases, 61.
  The choir apse made polygonal, 62.
  Time of this style, 62.
  Examples, 65, 268.
Trebitsch church, 65.
Treves cathedral, censer, 152.
  Library bindings, 151.
  Madonna church, one of first Gothic buildings, 67, 81.
  —— portable altars, 136.
  Town library, enamelled chest, 166.
Tribsees church, altar, 135.
Trier, *vide* Treves.
Triforia, 70, 272.
Tristan and Isolde, 238.
Troyes, Magdelene church, screen, 204.
Tuln chapel, 43.
Turris turriculum, 145.
Triptychs, 132, 136.
Tympanum above doorways, 39, 76, 242.

UEBERLINGEN, Mount of Olives, 260.
  Stalls, 218.
Ulm minster, shape of choir, 71.
  —— four side aisles without transepts, 72.
  —— glass-paintings, 237.
Ulm minster—*continued*.
  —— pulpit, 207.
  —— sculpture on doorway, 247.
  —— shrine, 224, 225.
  —— specimen of late Gothic, 91.
  —— stalls, 218.
  —— tower, 77.
  Antiquarian Society, singing-desk, 208
Unna parish church, altar, 129.
Urach church, font, 157.
  Stall of Eberhard, 221.

VAN EYCK, 127.
VAULT, Barrel, 44.
  Cross, 44.
  Cupola, 45.
  Fan, 98, 275.
  Net, 88, 98.
  Star, 47, 88, 98.
  Building used for the crypts, 45.
  First used in choir transepts and side aisles, 45.
  Then in nave, 46.
  Ribs, diagonal, introduction of, 46.
  —— often only ornamental, 47, 56.
  In the Transition period, 55.
  In the Gothic period, 68, 80, 88.
  In brick-buildings, 98.
  Painted, 229, 231.
  Fan, in Henry VII. chapel, 275.
  Supports, 46, 272.
Venerabile 147.
Venice, St Mark's, a modification of the Byzantine style, 15.
  —— description of the building, 15.
  —— mosaics, 228.
  —— Pala d'oro on the high altar, 126.
Verden, tomb of Bishop Yso, 199.
Verdun, Nicholas von, 126.
Vesica, 39.
  Window, 89.
Vlaarden, double chapel, 44.
Vienna, monastery of the Holy Cross, glass-painting, 234.
  —— grisailles, 236.
  St Michael's, 65.
  St Stephen's, shape of choir, 71.
  —— without transept, 72.
  —— façade in Transition period, 65.
  —— nave and aisles in second Gothic epoch, 83.
  —— choir in second Gothic epoch, 86.
  —— ciborium, 125.
  —— organ, 211.
  —— pulpits, 207.
  —— sculpture on doorways, 243.
  —— stalls, 218.
  —— tomb of Frederick III., 198.
Viollet le Duc, 272. (Note, 242.)

Vischer, Herman, 189.
——— Peter, 168, 201.
Volwinus, Master, 122.
Vreden collegiate church, monstrance, 149.
Parish church, high altar, 135.
——— chandelier, 174.

WALL-ALTAR, 125.
Wall-lights, 181.
Wall-painting, *vide* Painting.
Warburg, St John's church, Mount of Olives, 259.
Wechselburg church, pulpit, 205.
Weissenberg in Alsace, nave of minster, second Gothic epoch, 83.
WELLS, 190.
Werben church, altar, 135.
Candlestick, 179.
Chalice, 141.
Glass-painting, 237.
Werden, chalice and paten, 144.
Wesel, Martin's church, stone candlestick, 179.
Westminster, Henry VII.'s chapel, fan vault, 275.
Wettingen, in Switzerland, cloister church, 105.
Monastery, Gothic wooden chest, 226.
Wienhausen monastery, tapestry, 238.
Windows—
Romanesque, 19.
Arrangement in groups, &c., 56.
Made pointed and deeper in the Transition period, 57.
Wheel, or rose, 58, 79.
Fan, &c., 58.
Halved wheel, 58.
Large Gothic, with stone mullions and tracery, 69, 70.
Mullions as round columns, or bundles of columns, altered in their contour, 79.
Without capitals, and branching off into tracery, with trefoils, &c., 82.
Lengthened mullions under half the height by tracery, 84.
Tracery in the third Gothic period, fish-bladders, &c., 89.
Vessica or fish-bladder, 89.
In Gothic brick-buildings, 97, 98.
In perpendicular style, at King's College, Cambridge, 274.
William of Sens, 270.
Willibrod, St, altar, 136.
Wilsnack pilgrimage church, stone candlestick, 179.
Wilten chapter-house, chalice, 138.
——— patens, 144.
Wismar, Mary church, specimen of brick-building, 100.
Wittekind, Duke, 197.
Wittenberg town church, font, 189.
Wittstock, Mary's church, wooden shrine, 224.
Wohlgemuth, Michael, 134.
Wolfgang, St, altar, 134.
Worms baptistery, 185.
Cathedral, vaulted, 48.
St Paul's, pavements, 240.
Wunsdorf collegiate church, 48.
Würzburg cathedral, burial-places, 193.
——— font, 189.
——— Kilian spring, 191.
——— monumental slabs, erect, 195.
——— sculpture on doorway, 242.
Lady's chapel, statues on buttresses, 249.
Mary church, three doors, 248.
Pleichacher church, Mount of Olives, 259.
University library, bindings, 151.

XANTEN cathedral, altar, 134.
——— candlestick, 179.
——— chest of St Victor, 166.
Collegiate church, four side aisles without transept, 72.
——— specimen of later Gothic, 91.
——— stalls, 215.

Yso, Bishop, tomb, 199.

ZEHDENIK cloister church, chalice, 141.
Zinna cloister church, ciborium, 147.
——— pointed arch in vaulting, 96.
Znaim chapel, 43.
Zug, Oswald church, shrine, 224.
Zurich antiquarian museum, pyx, 144.
Cathedral, gallery, 19.
Zwickau, lady's church, altar, 134.

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